

# Vertebrate Pest Control Without Poisons

Thomas Wittman  
[www.gopherslimited.com](http://www.gopherslimited.com)



# Why not use poisons?

- Many poisons kill non target pests
- Poisons usually do not solve the problem
- Pollute ground water and wash into our lakes, streams and ocean
- Poisons can cause accidents to children and pets
- They can mask the root of the problem



# Animals Tested Positive For Rodenticide

- 79 percent of endangered San Joaquin kit foxes turned up positive
- Seventy percent of owls sampled in western Canada had rat poison in their livers
- In New York, half of 265 birds of prey tested were positive for poison
- In California, the victims include bobcats, barn owls, red-tailed hawks, coyotes, kit foxes, kestrels and scores of other predators and scavengers.

<http://www.sacbee.com/2011/04/17/3558267/potent-new-rat-poisons-killing.html#ixzz1VEqSkle1>

# Pest Animals we will discuss today

- Gophers
- Moles
- Voles
- Rats and Mice
- Ground Squirrels
- Raccoons, opossum and Skunks
- Deer
- Javalina or wild pigs

# Rodent Control in Leafy Green Vegetable Production

- Read Coop Extension's Crop Notes May, 2008  
**"FOOD SAFETY AND SALINAS VALLEY  
CROPS: RODENT CONTROL IN LEAFY  
GREEN VEGETABLE PRODUCTION**

Terry Salmon, Richard Smith and Steve Koike  
County Director and Extension Vertebrate  
Specialist, San Diego County and  
Farm Advisors, Monterey County

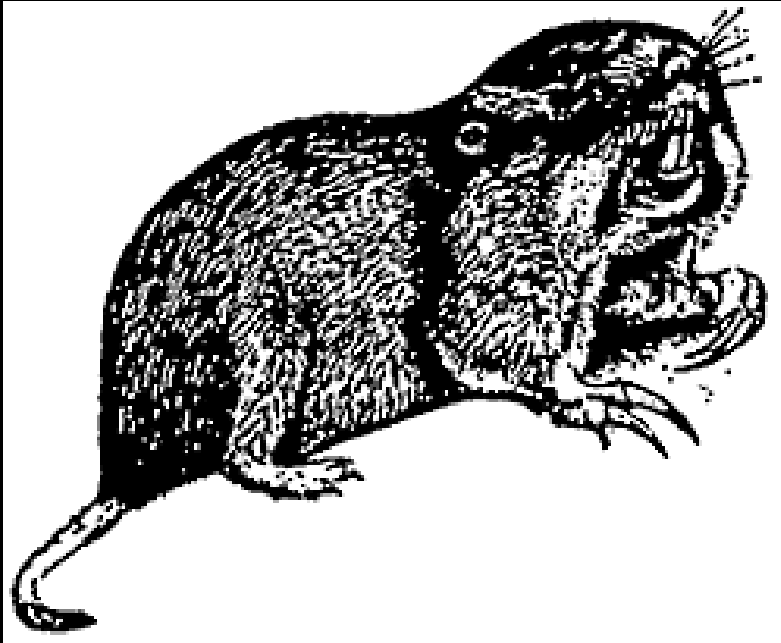
# Farm Advisors Findings

“In general, using rodenticides indiscriminately and extensively is ill advised due to the risk for developing resistance in the rodent population.

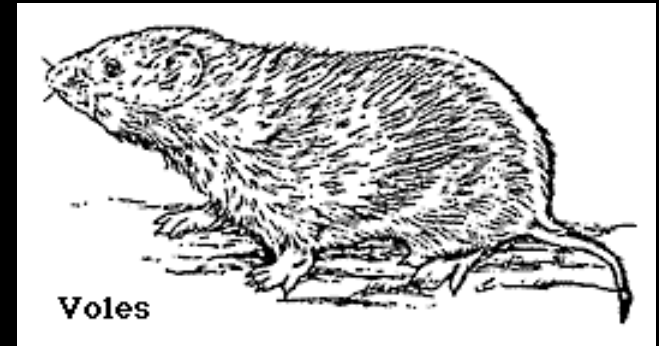
Other measures for controlling rodents include trapping. Exclusion fences may be effective for mice, but are not effective for ground squirrels.”

“To our knowledge, voles, mice, ground squirrels, and other rodents in coastal California agricultural fields have not been found to harbor pathogenic *E. coli*. Based on the studies mentioned above, it appears unlikely that these rodents will be found to be a common or important source of O157:H7 and other pathogenic strains.”

# Gopher and Mole and Vole



Gopher



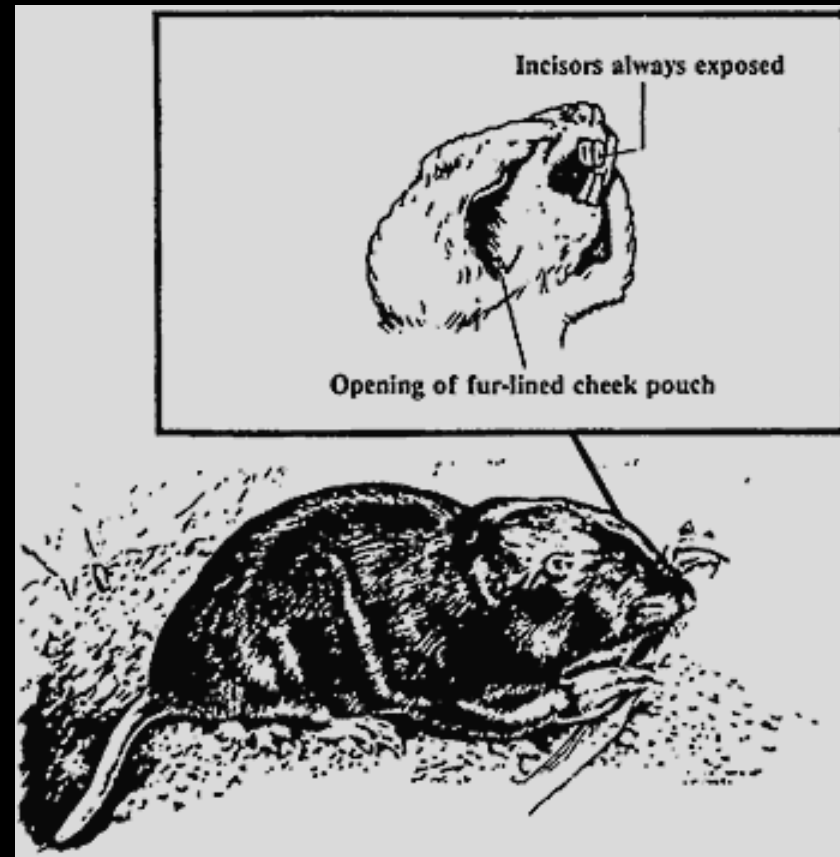
Vole



Mole

# General Biology of Gophers

- *Thomomys bottae* is most common in our area (CA)
- Named “Pocket gopher” because of cheek pockets
- Front teeth protrude through lip to aid digging



# Meet a Pocket Gopher



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To View online go to [youtube.com/gopherslimited](https://www.youtube.com/gopherslimited)





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Gopher (*Thomomys bottae*)



Broad Footed Mole





A large thomomys bottae gopher

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# Range of Pocket Gophers



Range of the plains pocket gopher (*Geomys bursarius*) (dark) and Botta's pocket gopher (*Thomomys bottae*) (light) in North America.



Range of the northern pocket gopher (*Thomomys talpoides*) (dark) and yellow-faced pocket gopher (*Pappogeomys castaneus*) (light) in North America.



Range of the southeastern pocket gopher (*Geomys pinetis*) (dark) and southern pocket gopher (*Thomomys umbrinus*) (light) in North America.

Note: The *T. bottae* is the smallest of the gophers





# Range of Moles



**Broad-footed Mole**

**Hairy-tailed Mole**

Moles live in North America, Europe, and Asia  
There are seven species in North America  
Alone



**American Shrew-mole**

**Eastern Mole**

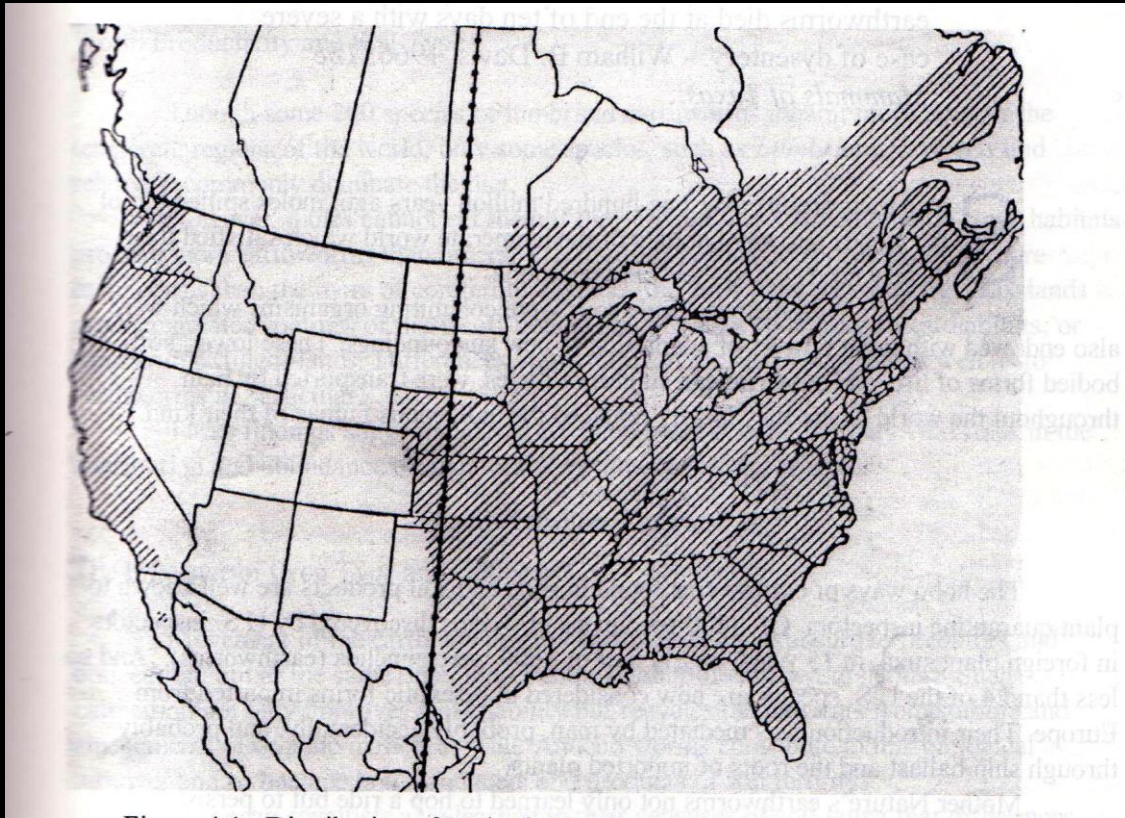


**Townsend's Mole**

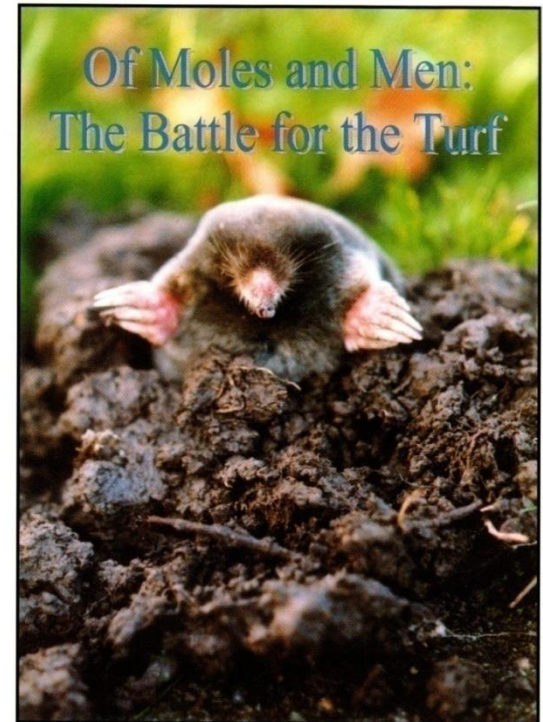
**Star-nosed Mole**

**Coast Mole**

# Mole Range in US



Note that moles are not present in the dry areas of the US



patrick h. thompson

Best book on moles

# Gopher and Mole Skulls



Made for chopping and grinding



Made for capturing and tearing flesh





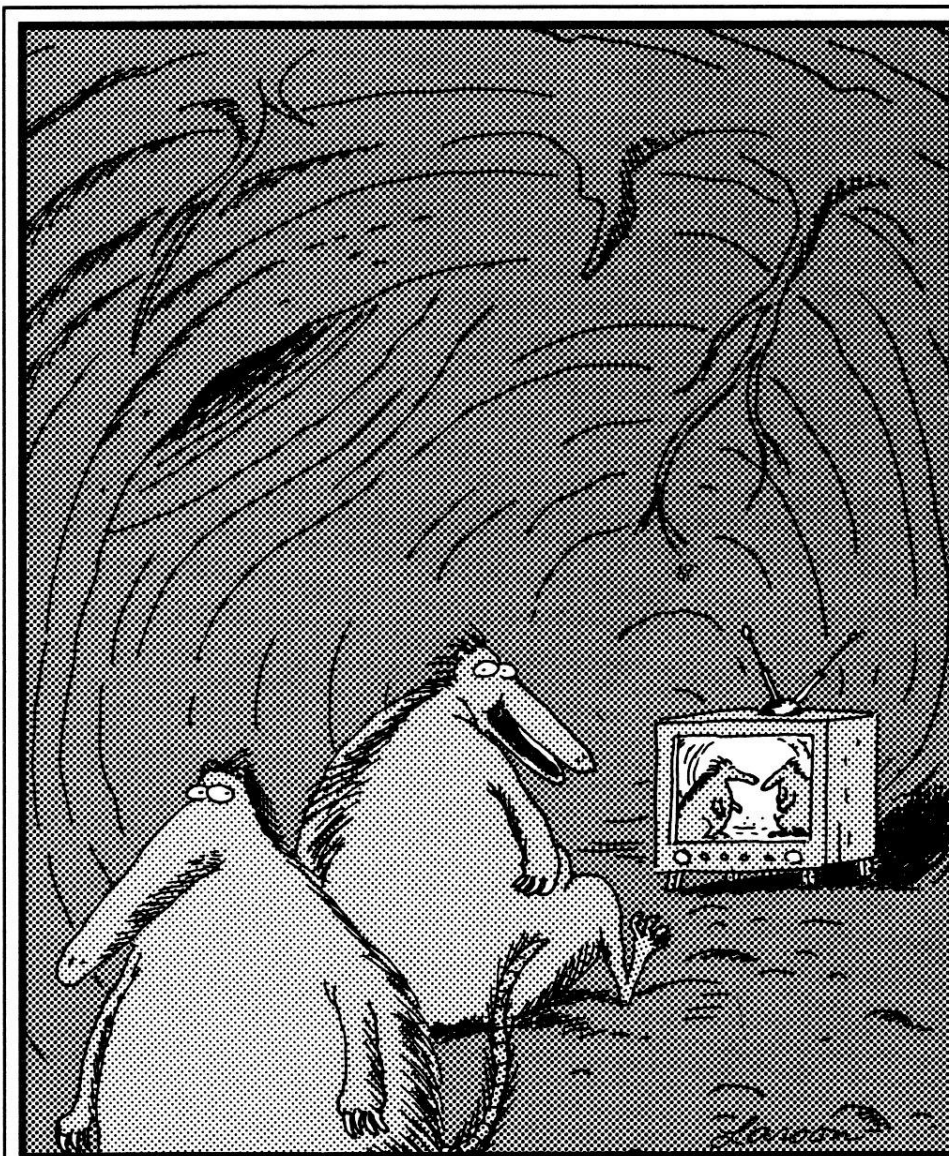
# Gopher Life Cycle and Breeding

- Lives three to five years
- Does not hibernate and can be active any time
- Can have three to five litters per year of two to ten young
- Female is pregnant for 18 days, young are weaned in 5 to 8 weeks
- Mother drives young off and dispersal begins, usually 3 to 400 feet from old burrow
- Nocturnal grazers and wanderers



# Gopher Lifestyles

- Solitary with own burrow containing nests, food caches , dumps for feces and water sump holes to avoid flooding
- Territorial by nature and will fight to the death if caged together, gophers will share burrows during mating season
- Some gopher burrows are common and used by many gophers
- Re-occupancy of burrows is rapid – within minutes or hours
- There can be from 1 to 200 gophers per acre but usually range from 24 to 36



"Vera! Come quick! Some nature show has a hidden camera in the Ericksons' burrow! ... We're going to see their entire courtship behavior!"



# One gopher's work



One gophers work over two week period

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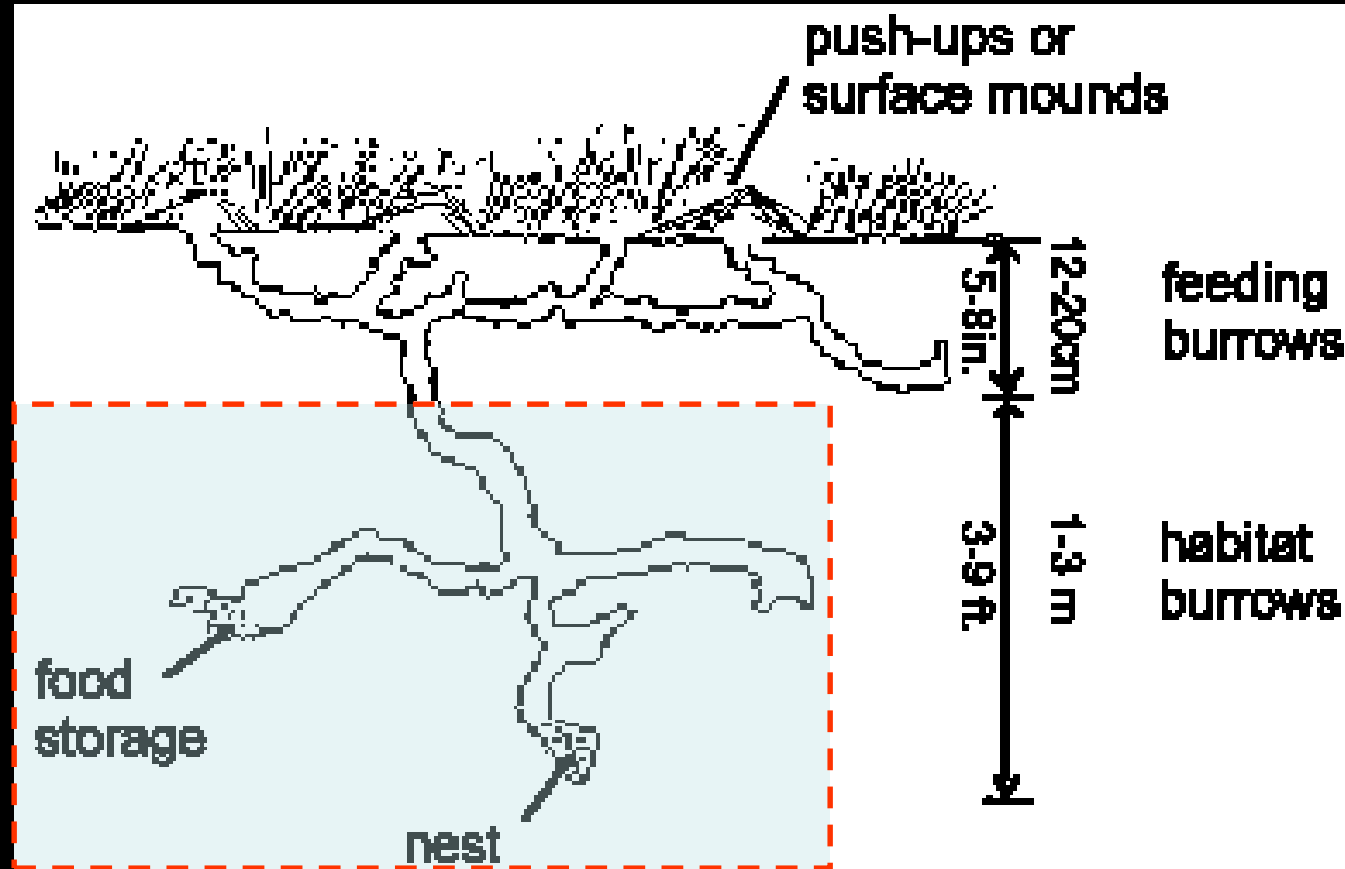


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# Burrow System

- Burrow system can be up to 3 hundred square yards but a small area is base
- There are surface mounds and feeding burrows
- Burrows are plugged during inactivity or nesting
- Nest portion is usually under a bush or tree to provide water





A photograph of a field with a gopher burrow system visible as a series of raised ridges and tracks in the soil. The soil is dark brown and appears to be a mix of loam and clay. The burrow system is a series of parallel ridges and tracks that run diagonally across the field. The ridges are raised and have a rough, uneven texture, while the tracks are deep and narrow. The field is surrounded by trees and a fence in the background.

One gopher's burrow system

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# Nesting Site



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# More Gopher Nests









Gophers often invade from the surface at night



# Minimizing Gopher and Mole Damage



Most Damage is from mounds smothering lawns





Remove soil and find good lawn under



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# Identifying Gopher, Mole and Vole Burrows

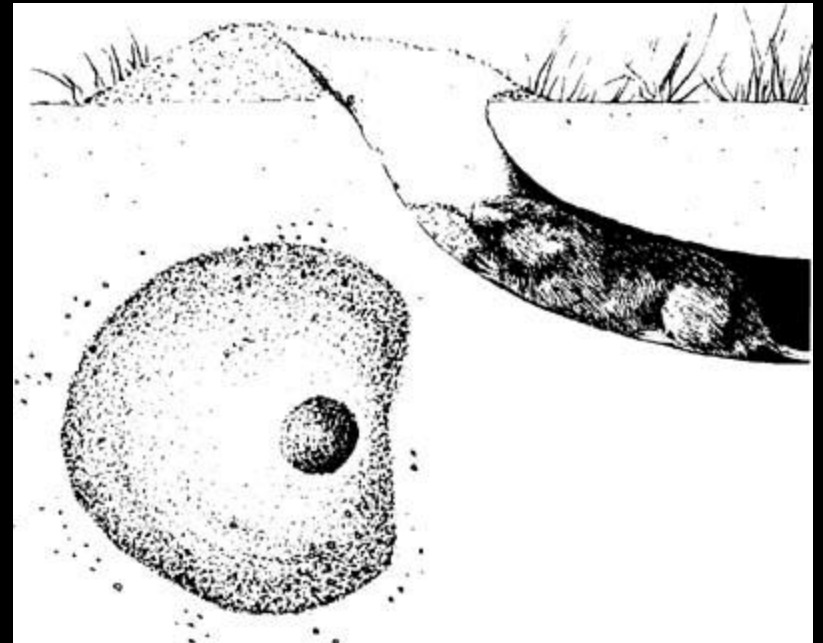
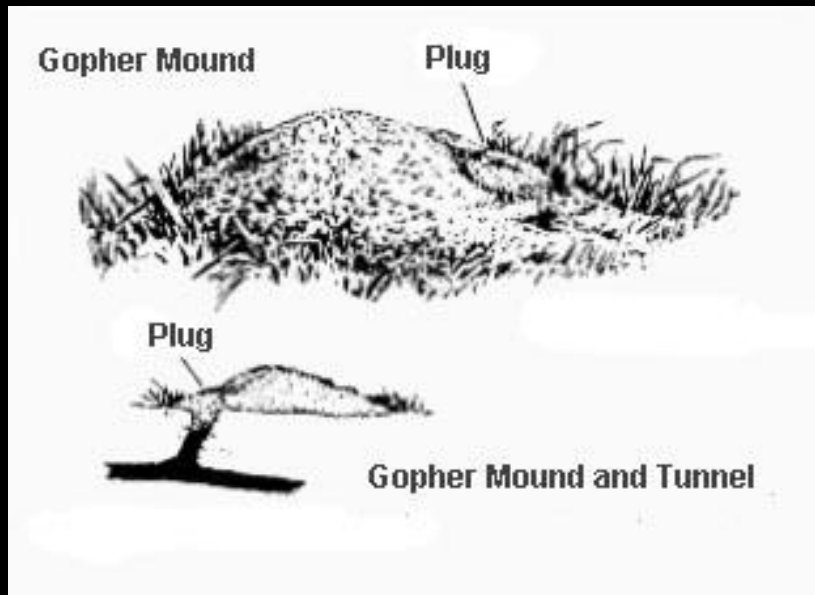
- Gopher mounds are fan shaped and have plug
- Mole hills are rounder and do not have a plug
- Voles do not use a deep burrow system for feeding, but surface feed instead. Trails can be seen in grass on surface
- Gophers and voles eat vegetation
- Moles eat insects and worms and are generally believed beneficial
- Mole mounds can be tolerated if cleaned up before grass under soil dies
- Gophers, moles and voles use each other's burrows



# Gopher Mounds and Mole Hills



# Gopher Mounds



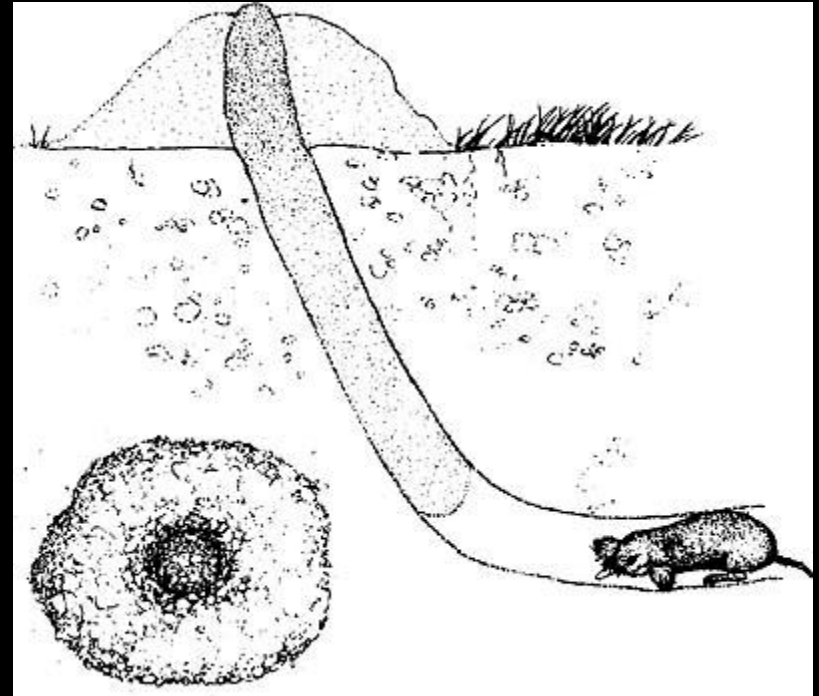
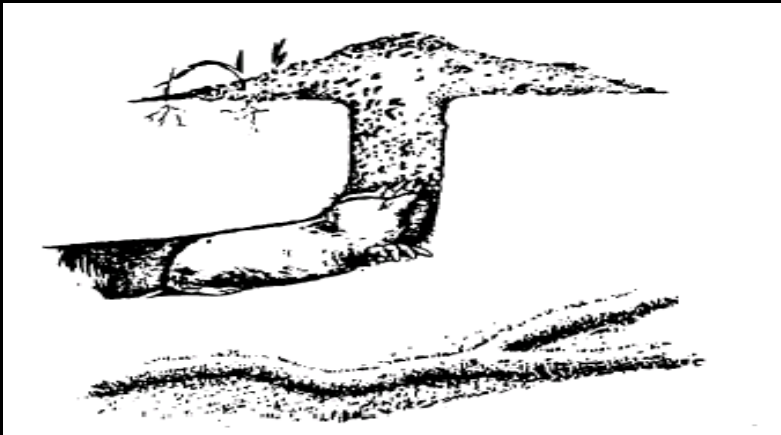


# Gopher Mound



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# Mole Mound





# Mole Mounds





# Surface Mole Mounds



# Mole Surface Trails











Gopher mounds and mole hills within two feet



# Moles

- Diet consists of insects, grubs, worms, spiders, snails, & beetles.
- One litter per year.
- Short brown velvety fur.
- Active year round but antisocial.
- Prefers moist, sandy loam soils.
- Paddle like fore feet with prominent nails.
- Lacks external ears and eyes appear to be missing.
- Extensive burrow system





Broad Footed Mole





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# Gopher or Mole?



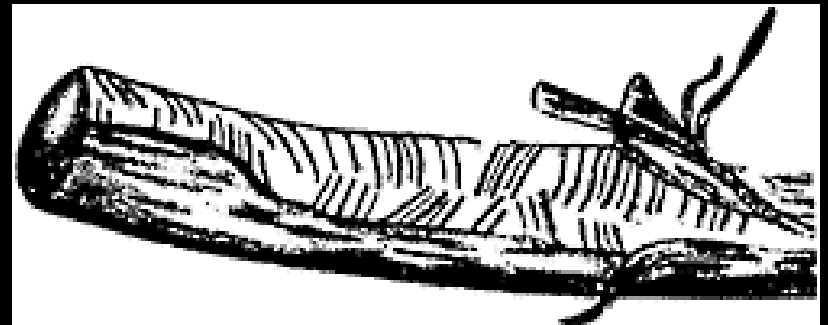
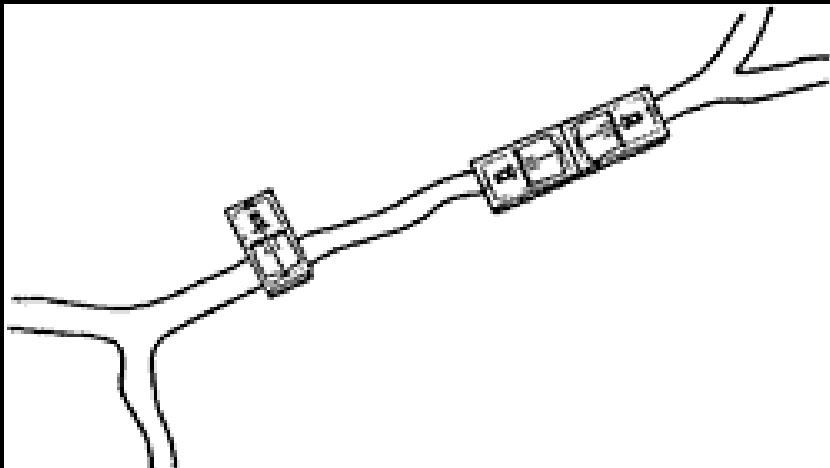
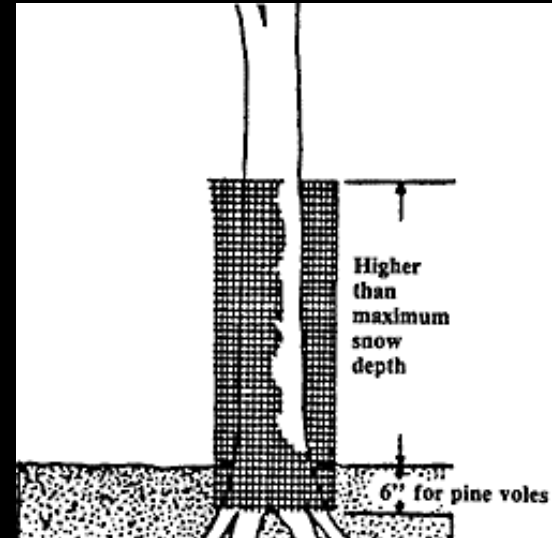




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# Vole Runs and Damage Control





# Habitat Modification to minimize voles

- Eliminate weeds, ground cover, and litter in and around crops
- Lawn and turf should be mowed regularly
- Mulch should be cleared 3 feet (1 m) or more from the bases of trees
- Soil tillage is effective in reducing vole damage as it removes cover
- Keep a barrier of clean land around crops – 15 feet if possible



Voles love rock walls

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Vole damage on broccoli and chard



Nearby vole colony





Vole damage on ornamental kale next to agapanthus



# Safe Vole Trapping



Mouse trap with large trigger with 4 penny nail to stabilize trap

Note: see video of this method at [gopherslimited.com](http://gopherslimited.com)





Traps are covered with plastic channel to protect other animal and direct voles into traps





Note that mice also invade vole burrows

# Plants Gophers Eat Last

- Amaryllis, daffodils, datura, crinum, sage, canna, most iris, geranium, salvia, snapdragons, marigolds, dianthus, nicotiana, vinca, scabiosa and gypsophilia, sea stacice , dahlias, ageratum
- Best choices are aromatic, herbaceous, drought tolerant perennials
  - Lavender, sages, rosemary, thyme, oregano





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# Crop Strategies for Gopher Control

- Rotate to decrease populations by alternating crops that attract gophers
  - Crops with tubers and crowns are favorites
- Cover crops mixes with bell beans, fava beans and grains drive gophers to edges
- Most clovers attract gophers
- Many native weeds provide food for gophers
  - Malva, poppies, plantain, oxalis, crab grass



# Sour Clover (*Melilotus indica*)

- contains Coumarin in its roots.
- Sour clover is nitrogen fixing
- re-seeds readily
- Attracts Beneficial Insects
- May be excellent for orchard covers



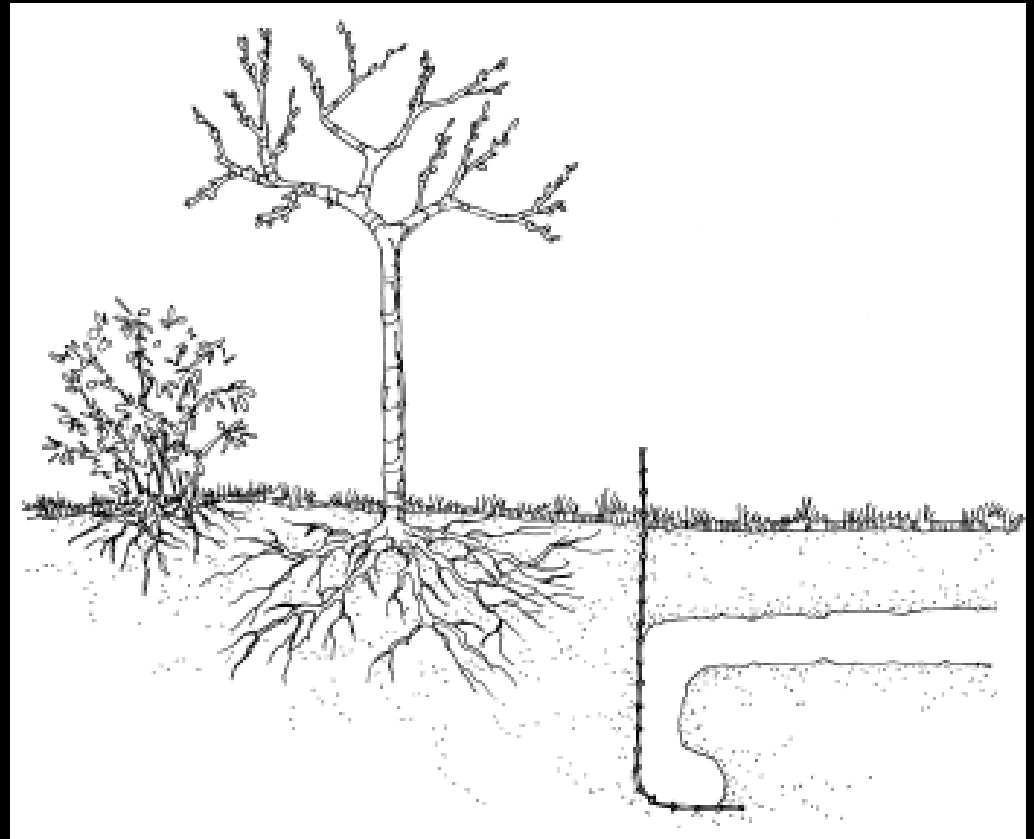
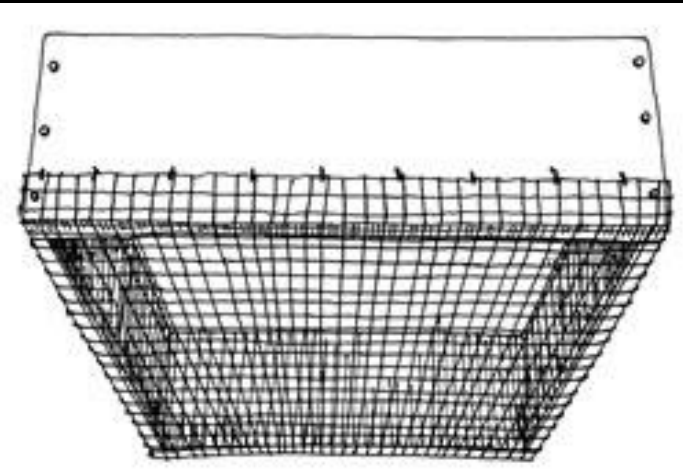
# Gopher Purge



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# Gopher Barrier Setup





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Failed barrier due to non porous material used on slope.  
This barrier also failed due to gopher mounds at edges  
acting like ramps

# Can Gophers Climb?

To view this video online go to [youtube.com/gopherslimited](https://youtube.com/gopherslimited)

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# Raised Garden Beds



























Gopher and ground squirrel barriers using silt netting  
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# Gopher Proof Fortress



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# Gopher Baskets and Wire



Galvanized Wire  
Limited Life  
Environmental Pollution

Stainless Steel  
Lasts Forever  
Costs More



Aviary wire eaten through



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# Gopher and Mole Wire Under Lawns and Gardens

Mesh should have 1-2 inches  
of soil from roots of sod

Sod Layer



If wire is too shallow gophers pull  
grass down moles push dirt up

If too deep, gophers and moles live  
above the wire

Wire is lapped 6" and  
joined by landscape  
staples, hog rings or  
zip ties



# Wire Over Existing Lawn









## Rodent Fence Constructed of 48" Stainless Steel Mesh



4 "



6 "





# Vertical Barrier









Mole Damage



Gopher Damage



Damage in lawns with gopher wire to high  
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# Predators of the Pocket Gopher, Moles and Voles

**“Our cat is a petite tabby, weighing only 9.5 pounds”**

- Our cat's records for the past several years are:
- 2001: 58 gophers, 4 mice
- 2002: 65 gophers, 7 mice
- 2003: 43 gophers, 6 mice, 2 moles
- 2004: 28 gophers, 4 mice



**projectpurr**

831-423-MEOW

**"Will Work For Food...Barn Cats:  
Non-Toxic Pest Control"**

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A dog can do 10X the damage  
of a gopher and still not catch it



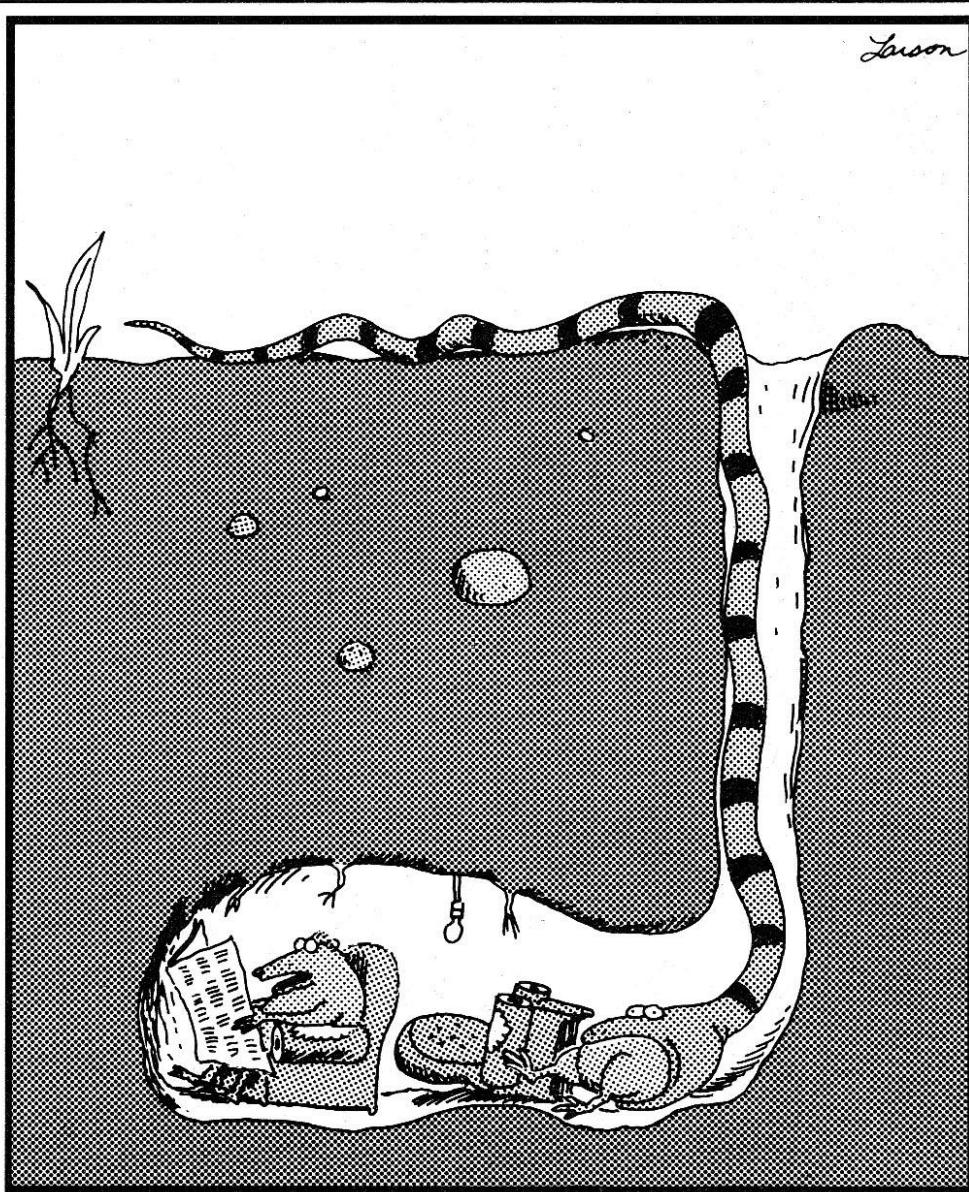
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# Gopher Snake



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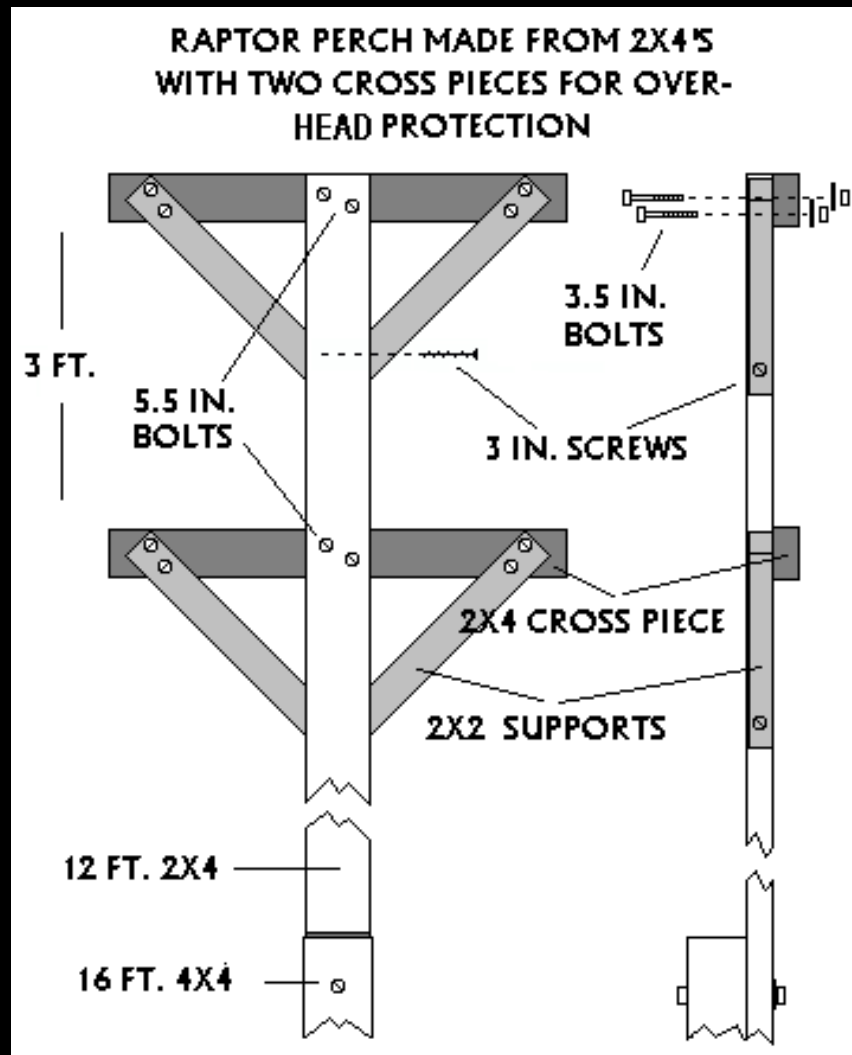


"Well, I'll be darned. Says here 70 percent of all accidents happen in the hole."

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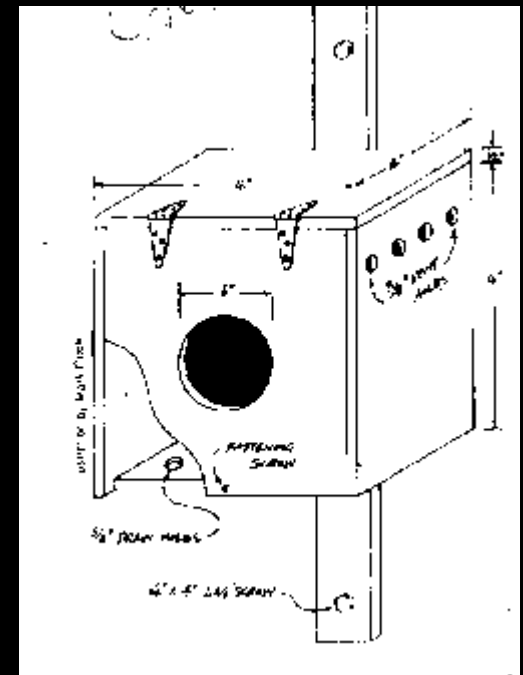
# Great Blue Heron and Egret





# Barn Owl Nest Box

- Barn owls range up to two miles from nestbox
- A family is usually two adults and two chicks
- One barn owl family can eat up to one thousand gophers per season





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# The Hungry Owl Project



\$85

[www.hungryowl.org/boxes.html](http://www.hungryowl.org/boxes.html)

Alex Godbe

Program Director

415-454-4587

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Barn owl box destined for  
predation by Great Horned  
Owl

Flagpole Mount –  
easy to clean and  
maintain



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# Urban Myths and Subjective Solutions

- Juicy Fruit Gum
- Ex Lax, chocolate flavored
- Glass
- Rose cuttings
- Hair
- Cat Litter



# Repellent Liquids

- Drenches of foul tasting and smelling liquids can be effective for single plants and trees (Ropel, castor oil)
- Coyote and cat urine can also work in specific areas for a short time (so will yours)
- Fish emulsion and other meat products can work around perennials

# My Favorite Repellants



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# Sonic and Other Noisemakers

- May be effective in small area for short time
- Can be homemade or purchased at craft fairs
- No scientific research yet exists





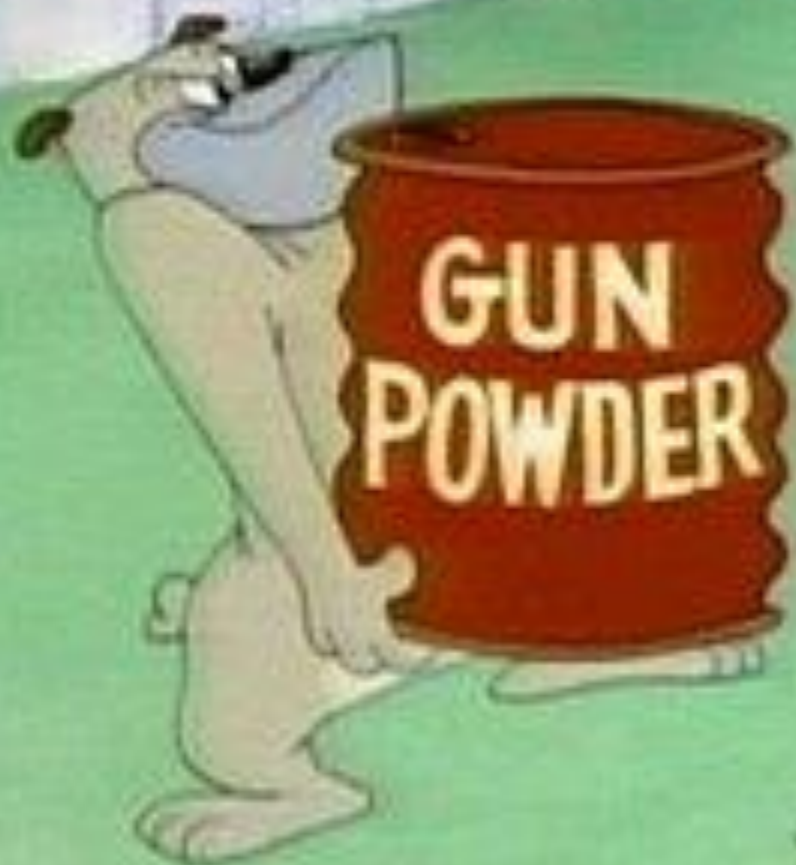
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# Flooding, Gassing and Blasting

- Flooding can be effective but often gopher gets away
- Gassing using lawn mower, tractor and auto exhaust might be effective
- Sulfur bombs have been known to work in some cases
- Rodent Torch and Blaster popular in orchards but are loud, expensive and dangerous but can be very effective due to burrow destruction









Smoke bombs available in many hardware stores

Large smoke bombs available from Agricultural Commissioner. Blower can add effectiveness

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Light, cover with soil, come back next day to see if burrow is open or new digging present, if new activity repeat. Beware of fire danger.





\$124.95

# Rodex Gopher Torch











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Manufacturing & Sales

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Cell (Voice or Text): (530) 640-3981



PERC units pressurize exhaust gas (carbon monoxide) and inject gas into gopher runs .

In University of California field trials, 65% of gophers and 75% of ground squirrels were consistently killed, Hurlburt maintains.



**PERC 206 \$5,590.00**



**PERC 412 \$8,295.00**



**PERC 620 \$14,995.00**



The Cheetah is \$989.00



# CO2 Burrow Fumigation



Gophers Limited \$189

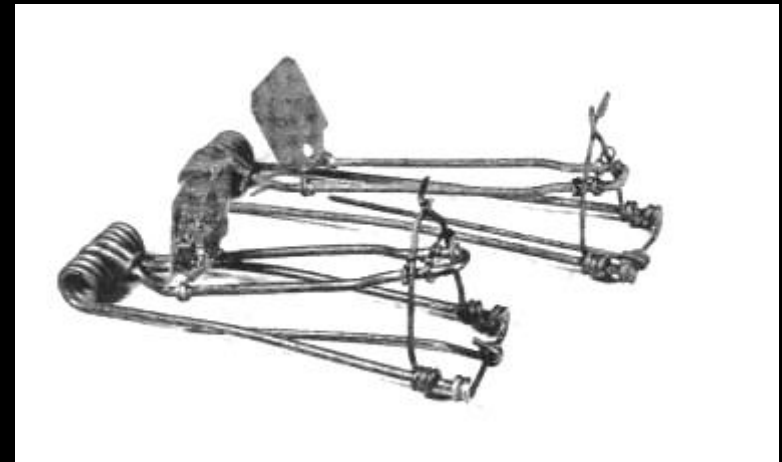
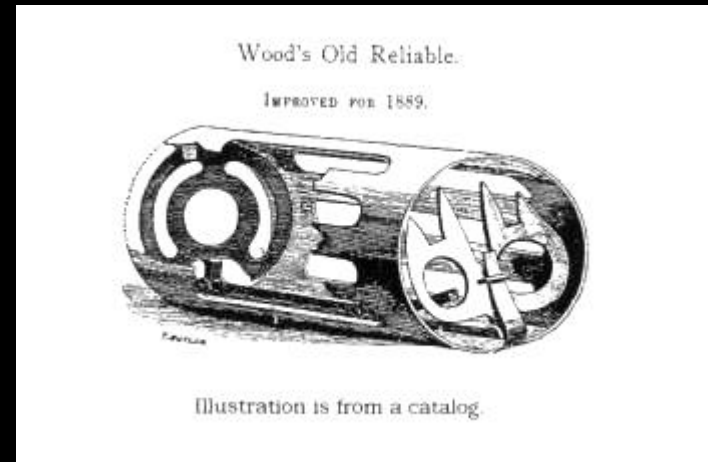
# Juggling For Gophers





# Gopher Traps: History

- First patented and commercially produced trap was the Woods Gopher trap, Patented in 1870 by Romanson Wood of Santa Cruz, California
- By 1900 12 more traps were patented all from California and Zephyr Macabee developed and patented his trap that has survived unchanged to this day



# Basic Trapping Strategies

- Focus on one area at a time
  - Too many spread out traps leads to confusion and lost traps
- Observe natural barriers and work to or from them
- Minimize time spent at each site
- Trap at freshest sites
- Focus on inner gophers so you can eventually only have to work borders



## Out of Control Gophers



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More out of control



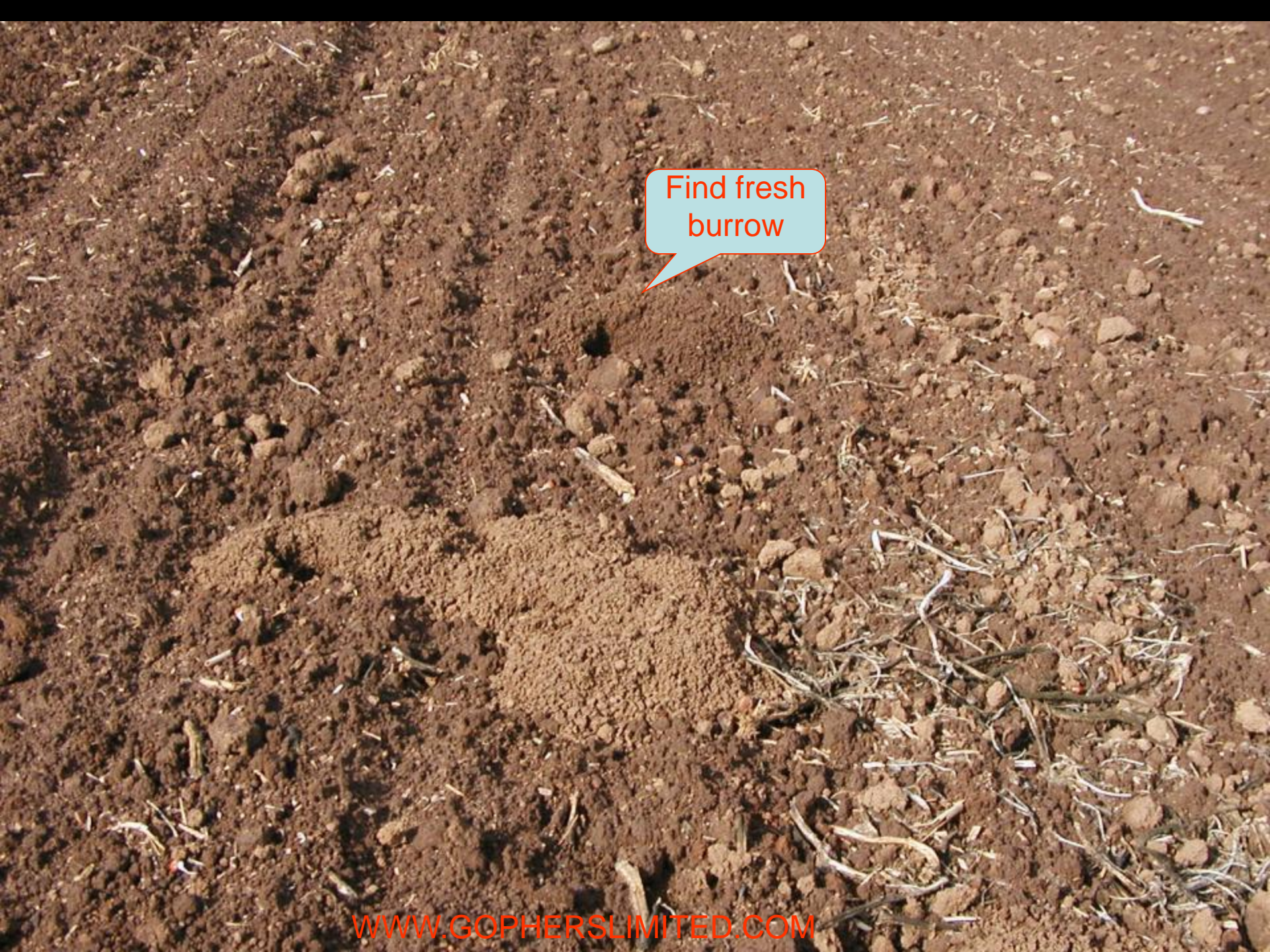
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# Find freshest run







Find fresh  
burrow



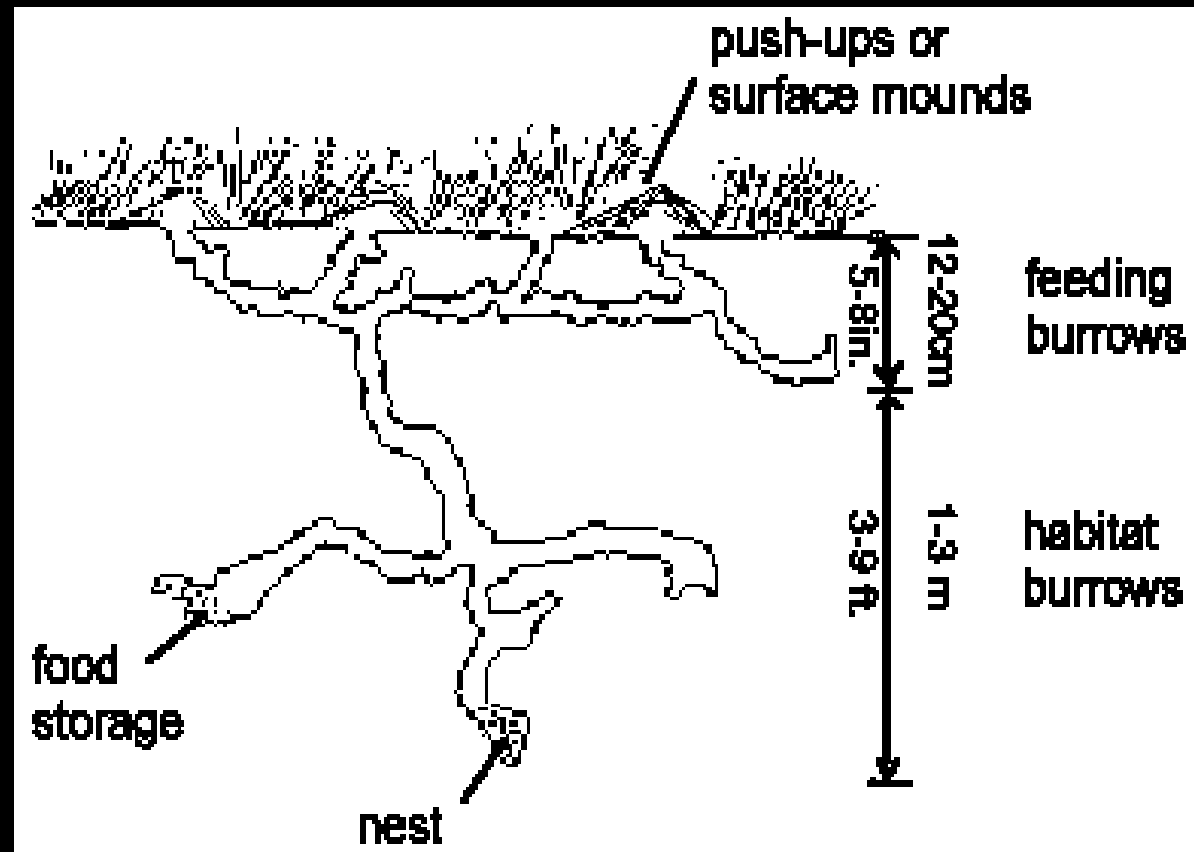


Right after rain – note texture and color



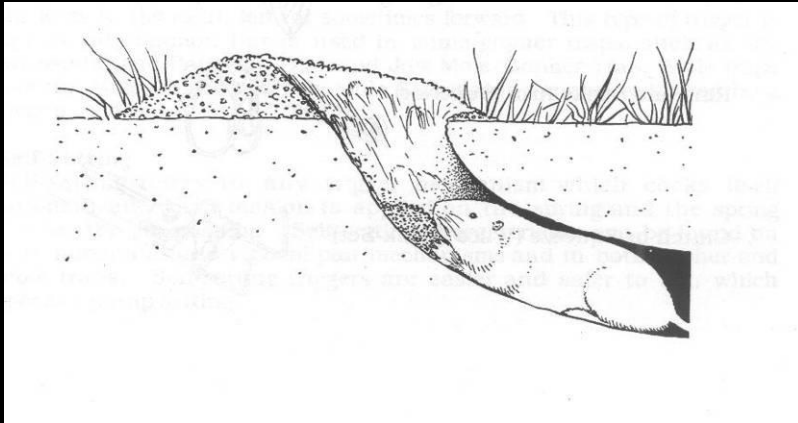
# Burrow System

- Most tunnels are only 6-10 inches deep
- Pay special attention to nesting sites





# Locating Run Entrance



# Trapping Techniques General Rules

- Set traps in early morning or late afternoon
- Be sure to trap all year as in winter breeding population is lowest
- Check traps often
- Wear gloves to protect yourself
- Trap in freshest burrow
- Stake or flag traps to find them
- Keep traps in ground, not in barn



# Basic Farm Trapping Strategies

- Early morning - burrows open right after dawn
  - Early evening
  - Early in spring prior to first litters
  - During fall just after planting cover crops
  - After a weather event or irrigation
  - After a field operation
    - Tilling, rolling, harrowing, mowing
  - During other operations in the field
    - Morning crop count
    - Moving irrigation pipe or repairing drip
  - During harvest
- 
- Best to keep traps in ground instead of barn so trapping becomes a continuous operation integrated into the general operation of a farm or ranch

# Estimating Gopher Population Numbers

Populations can be from 0 to 200 gophers per acre and vary by season and food supply

Best way to determine populations is to count fresh burrows after a field operation or a weather event





5 Acre Soccer field – 156 gophers caught  
31 gophers per acre





About 1 acre – fresh mounds  
indicate 5-8 gophers





About 1/2 acre – fresh burrow  
count 10-20 40+ gophers per acre









# Local Gopher Trap Collection



# Cinch Live Gopher and Mole Trap



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Find Plug



Open plug and expose tunnel



Set in trap so gopher goes to end to close burrow



# Live Snaring Gophers

- Wait for Gopher to become active
- Set up snare
- Wait Patiently (1-10 minutes)
- Pull snare quickly and go up to hole
- Drop gopher in bucket or cage
- Relocate at least 2 Miles away





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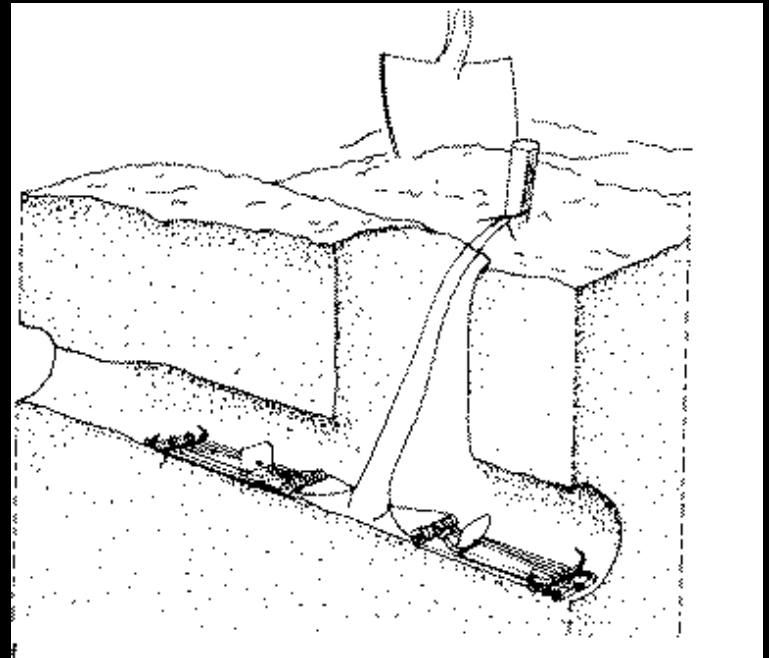
# Lethal Trapping Techniques

- Main Burrow Trapping
  - Dig to main burrow
  - Set two or more traps and stake them
  - Bury or cover excavation
  - Monitor by digging up excavation
- Surface Trapping
  - Open burrow entrance
  - Set trap
  - Monitor from above ground

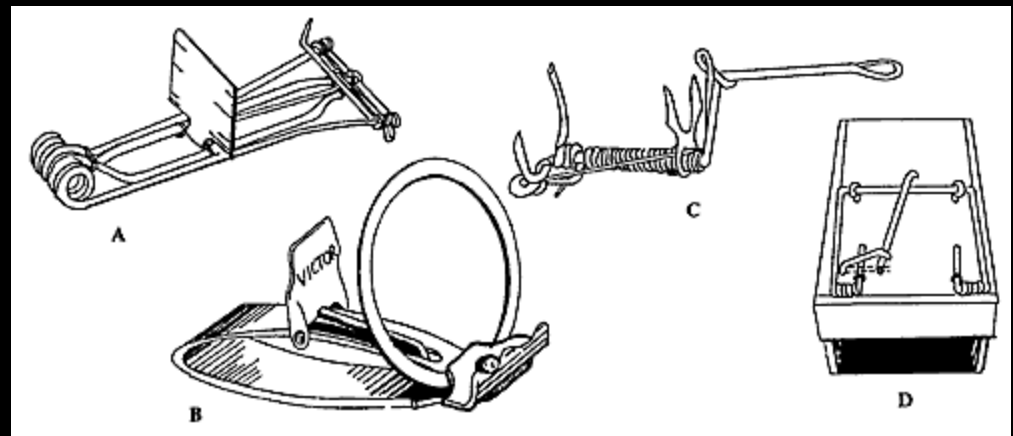


# Macabee and Box Types

- If using Macabee or box type traps, excavate at mound or probe for burrow, trap both ends of exposed burrow
- Check daily by pulling traps out of burrows



# Macabee and Box Style Traps

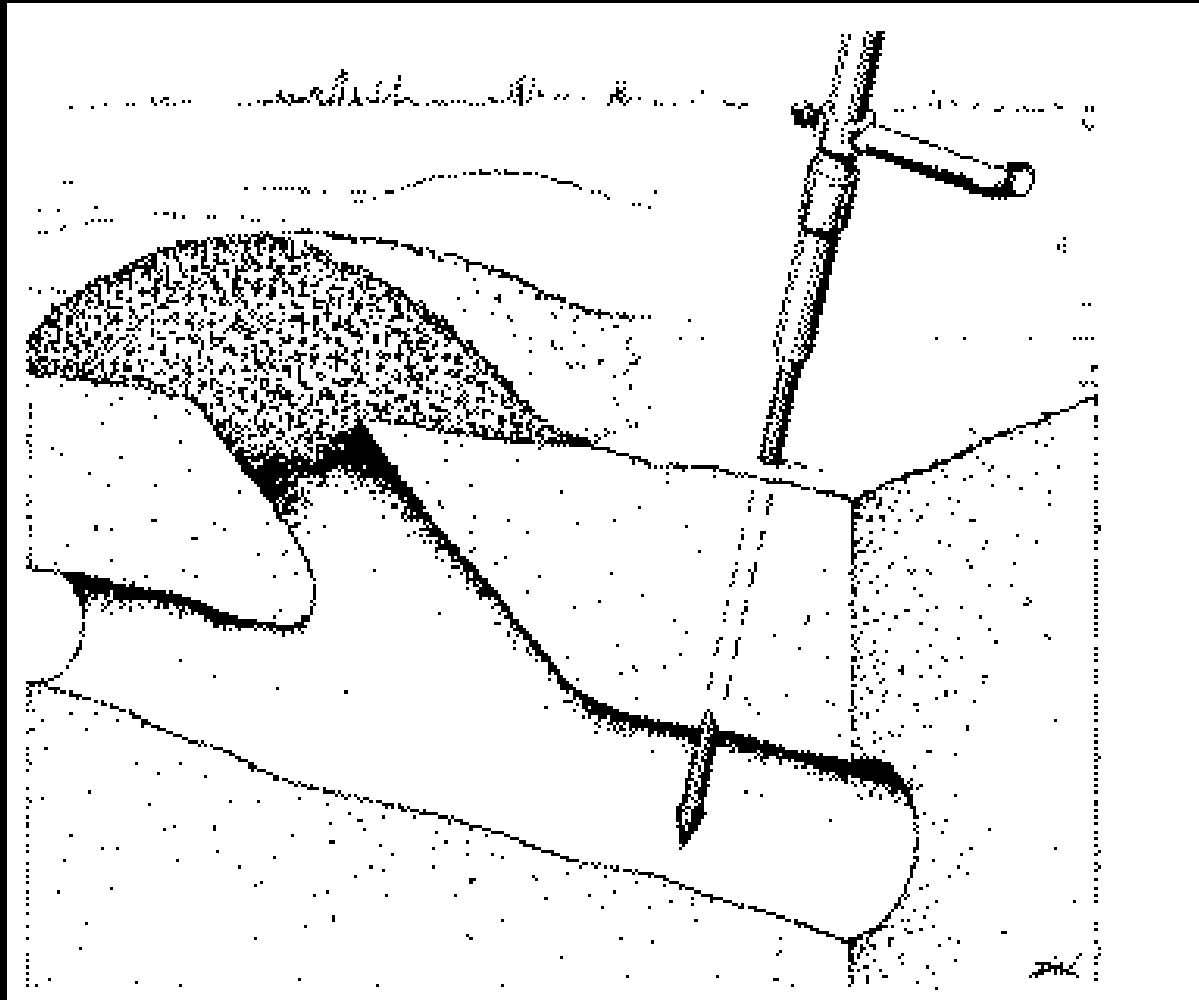




# Hiding Traps (Macabee and Victor)

- Dig to main burrow
- Set double trap
- Use brightly colored tape or wire to locate
- Use bright chalk marking paint

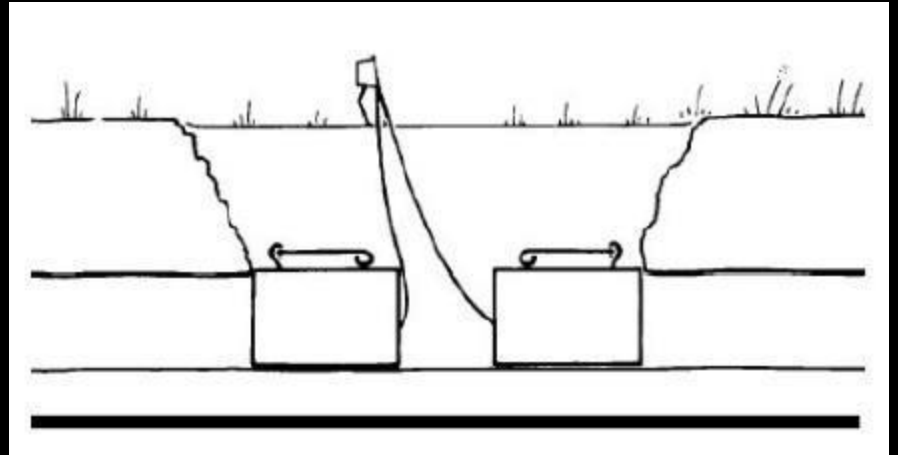
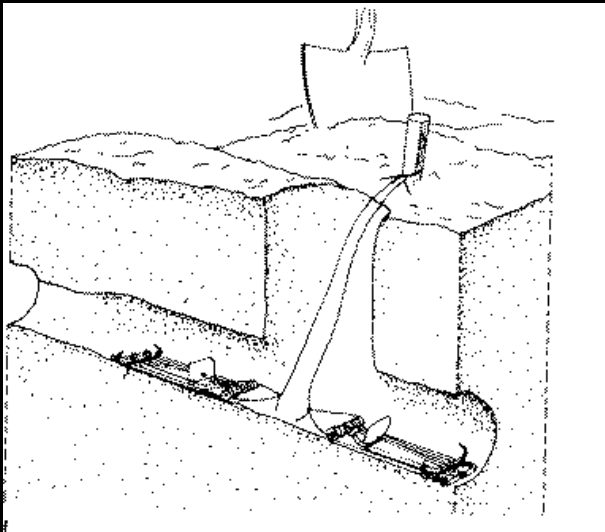
# Probe for Main Tunnel



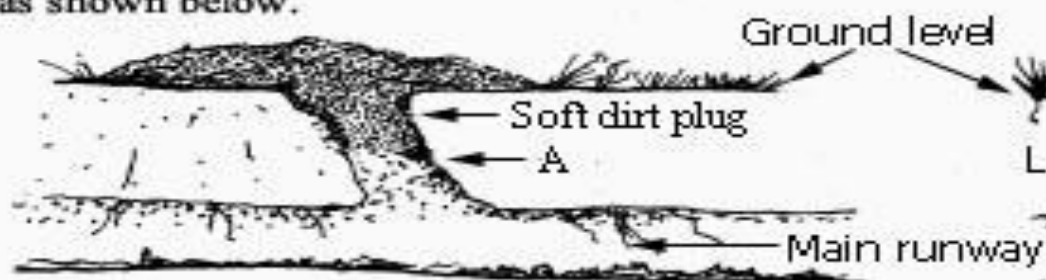
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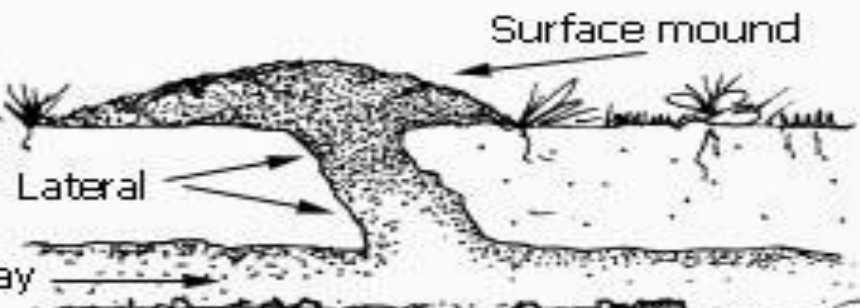
# Setting Up Macabee and Box Traps



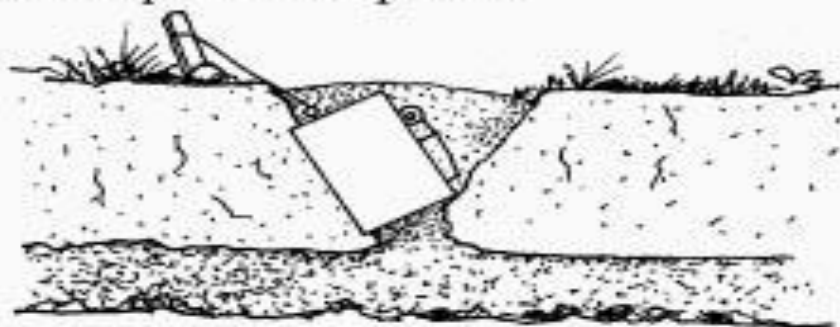
1. Dig out lateral runway to point "A" and clear away soil so trap can be placed as shown below.



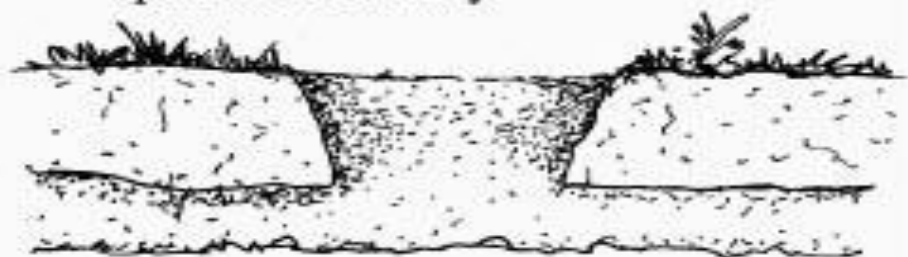
1. Locate main runway with shovel or probe.



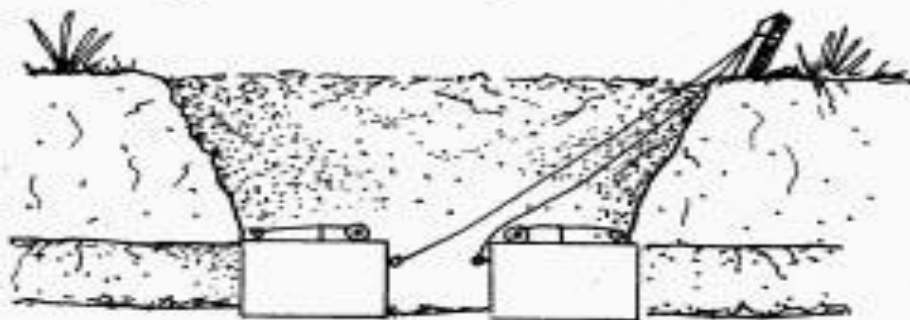
2. Set trap in lateral if possible.



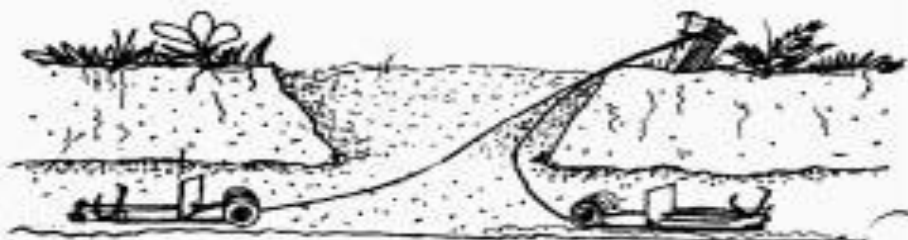
2. Cut through runway digging away soil sufficiently to allow placing of traps in open ends of runway.



3. If unable to set trap in lateral, set two traps in main runway.



3. Use large spoon to enlarge hole enough to receive traps. Place traps well back in runway and press down firmly.



4. After placing one or two traps as shown, cover completely with soil but not more than 1 inch deep on top.

4. After placing trap as shown, close open ends of runway with clod or clump of grass and cover with soil to shut out light.



# Gophinator Trap by Trapline Products



Similar to Macabe  
All Stainless steel  
Very strong spring  
Main burrow trap



Two Traps--\$14.99

# Gopher digging



# Gophers always plug open burrows



# Trapping Techniques: Cinch

- Advantages of a Cinch trap
  - Trap from surface – very little digging
  - Checking traps is easy
  - Removing gopher is easy
  - Easy to spot in field





# Cinch Trapping Strategy

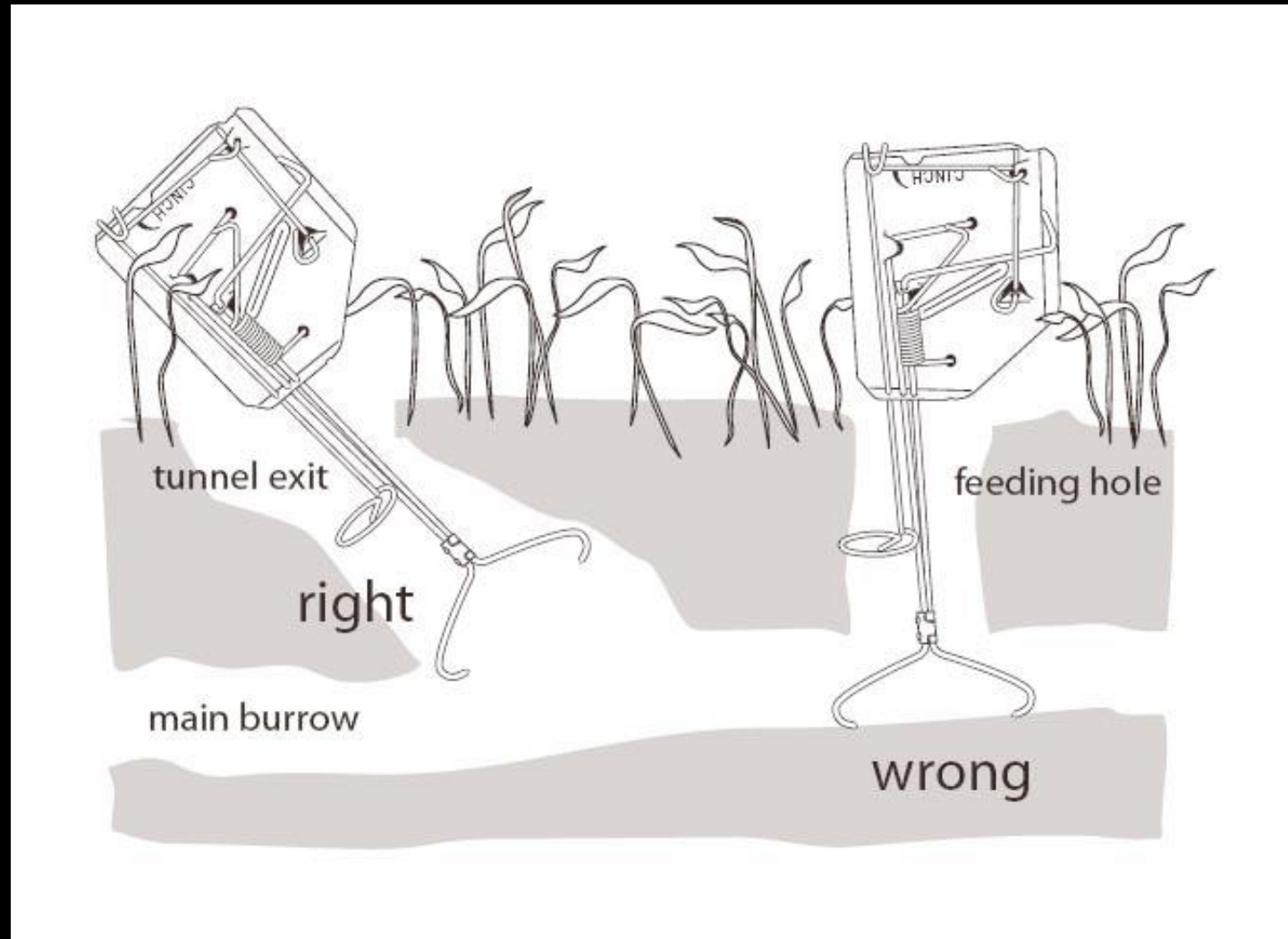
- Trap on surface mounds and openings
- Watch for fresh digging
- Open mound carefully and pull out loose soil
- Insert trap being careful not to push in more loose soil
- Be sure to leave burrow open

# Cinch Trapping Video

*Surface Trapping  
Gophers with the  
Cinch Trap  
gopherslimited.com*



# Proper Cinch Setting Technique



# The Pop





# Make New Burrow





# Trap whole Burrow





# Hair In Trap is Good











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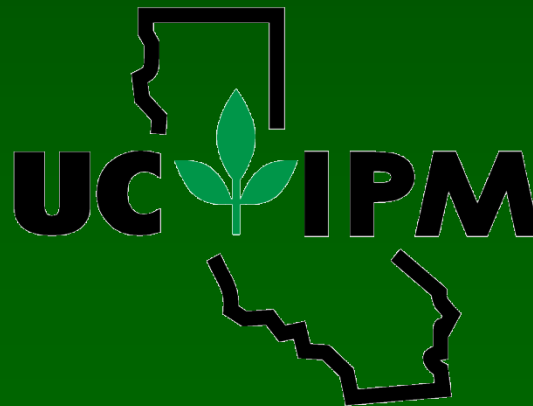
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# Integrated Approach to Controlling Burrowing Rodents

Roger A. Baldwin

UCCE Wildlife Specialist, Department of Wildlife, Fish, and  
Conservation Biology, UC-Davis



# EVALUATION OF THE EFFICIENCY OF THREE TYPES OF TRAPS FOR CAPTURING POCKET GOPHERS

MICHAEL J. PIPAS, GEORGE H. MATSCHKE, and GERALDINE R. MCCANN, USDA National Wildlife Research Center, 4101 LaPorte Avenue, Fort Collins, Colorado 80521-2154.



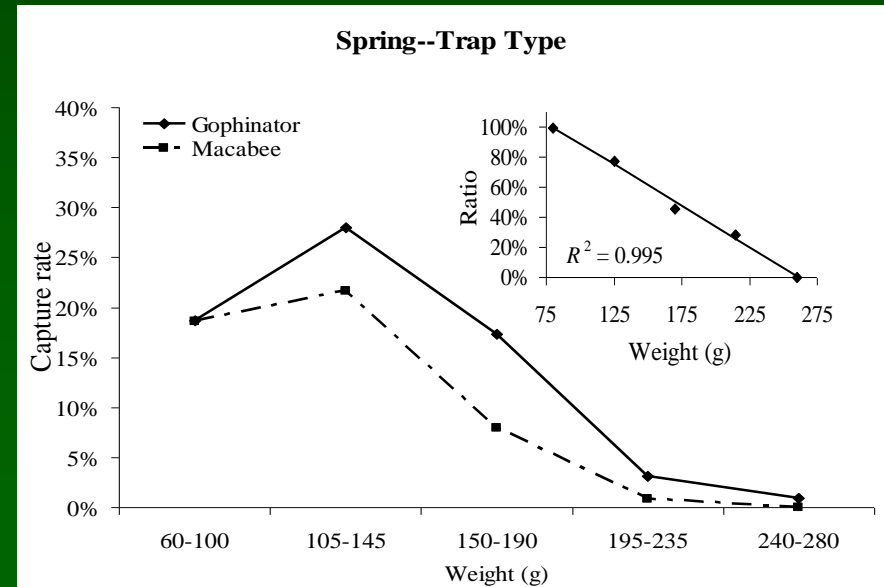
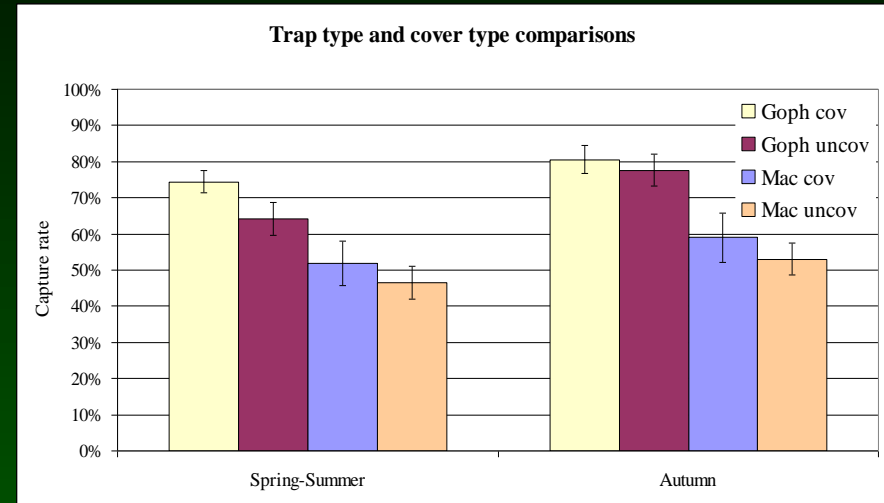
Trap Type	Number Trap Stations	Capture Efficiency (%) <sup>1,2</sup>	Time Efficiency <sup>1,3</sup>
Blackhole	121	18.3 <sup>a</sup>	0.032 <sup>a</sup>
Cinch	115	41.7 <sup>b</sup>	0.046 <sup>a</sup>
Macabee	124	27.7 <sup>a</sup>	0.036 <sup>a</sup>



# Trapping—Options

## Pocket gophers

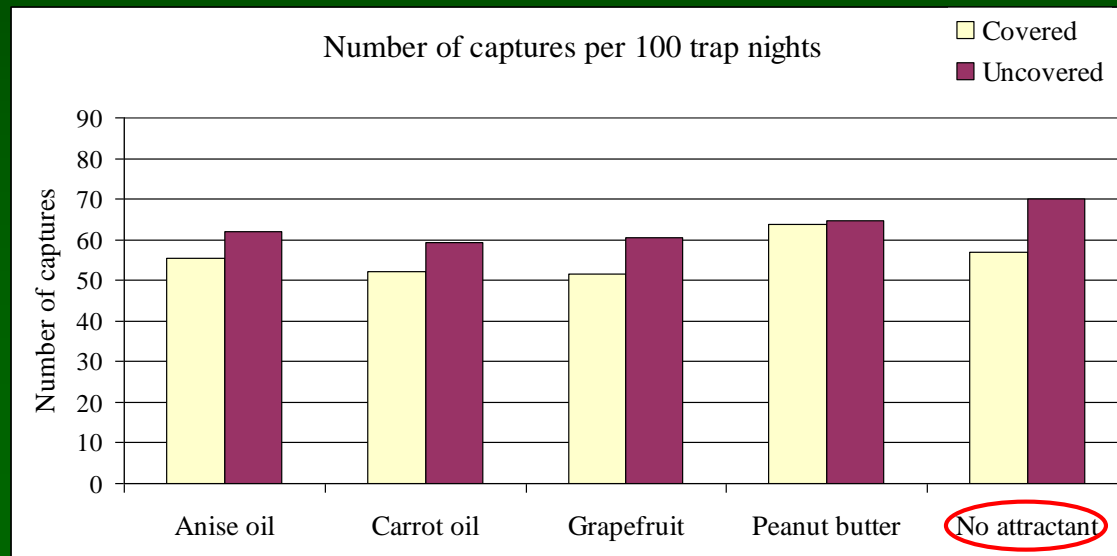
- Gophinator trap was more effective.
- Covered sets yielded slightly higher capture rates in spring-summer, but not autumn.
- Efficacy was offset by setting time.



# Trapping—Attractants

## Pocket gophers

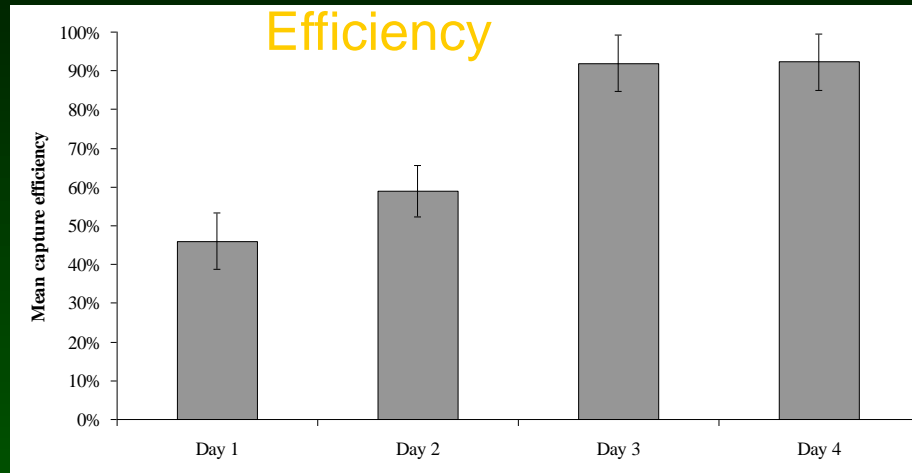
- We tested 4 attractants using uncovered trap-sets.
- We did not observe a difference in the number of captures across attractants ( $P > 0.123$ ).



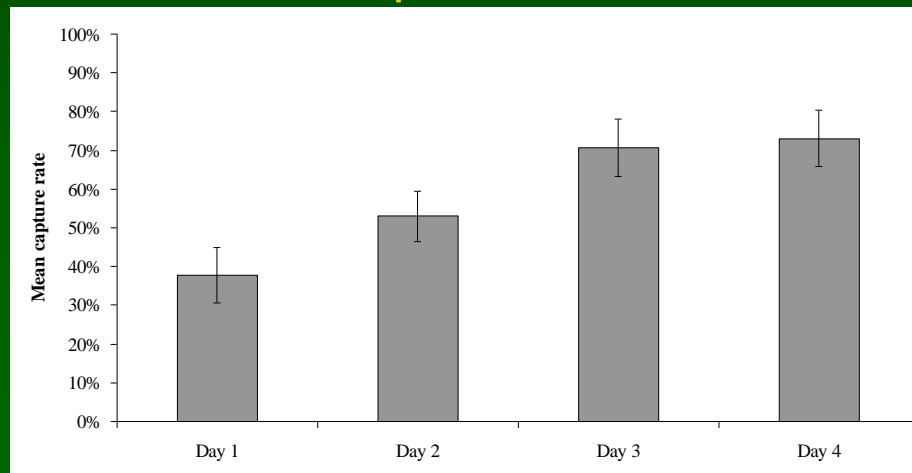


# Trapping—Learning Curve

Capture  
Efficiency



Capture Rate











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# Can you Eat Gophers?

- Gopher Pie

- 1 Gopher, skinned and cleaned
- 1/4 cup onion
- 1/4 cup green pepper
- 1/2 tbsp minced parsley
- 1 tbsp. salt
- 1/8 tsp. pepper
- 4 1/2 tbsp. flour
- 3 cups broth

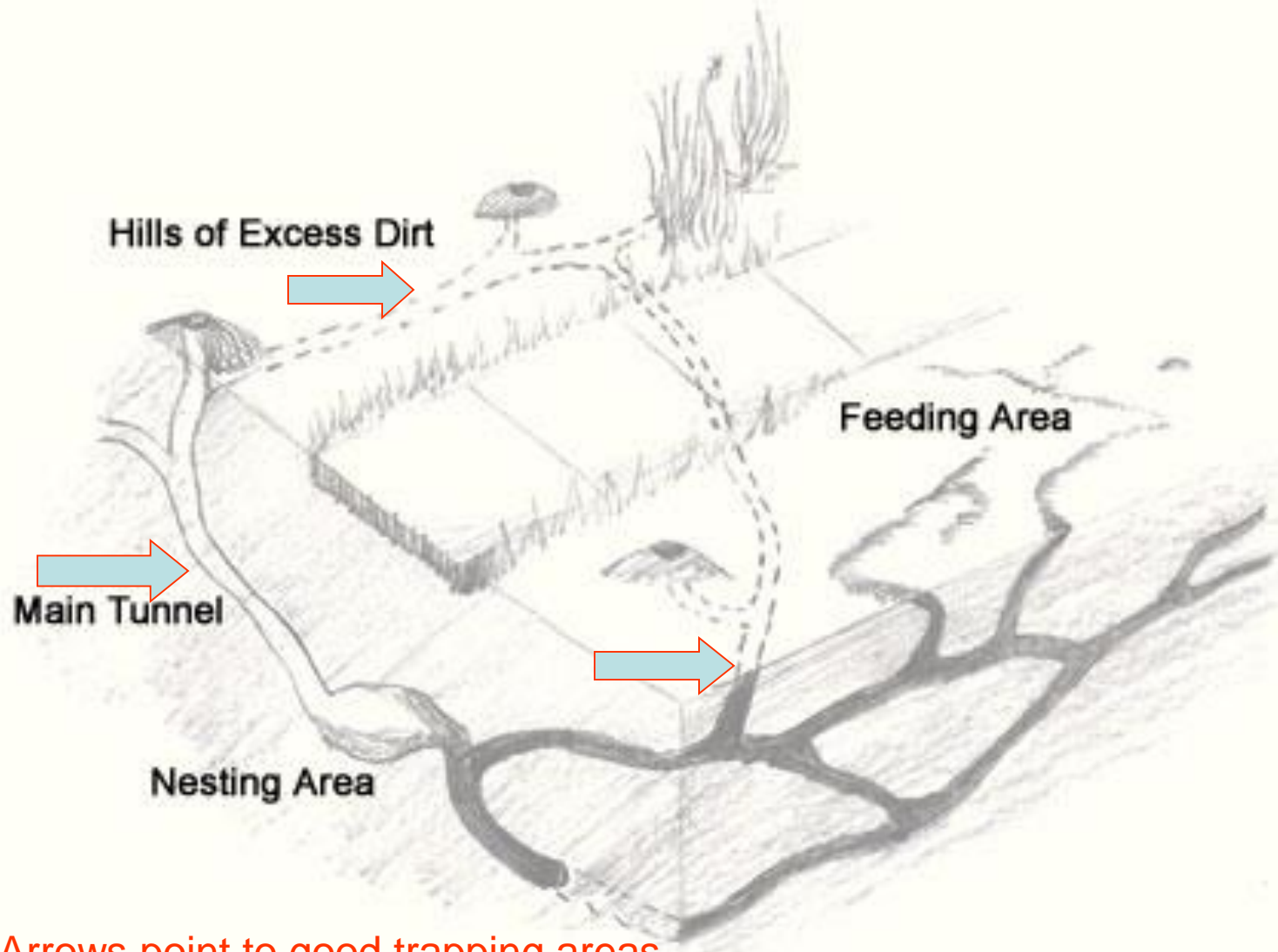




# Mole Trapping and Exclusion

- Moles eat worms, grubs and insects, not plants
- Moles are hard to trap so careful trap placement is necessary
- Moles do not like to touch iron
- Moles Learn quickly if you miss them
- Be persistent
- Vary trapping methods

# Mole Mounds









# Cinch Mole Trap







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Typical Mole Trapping Setup  
Using Cinch Traps





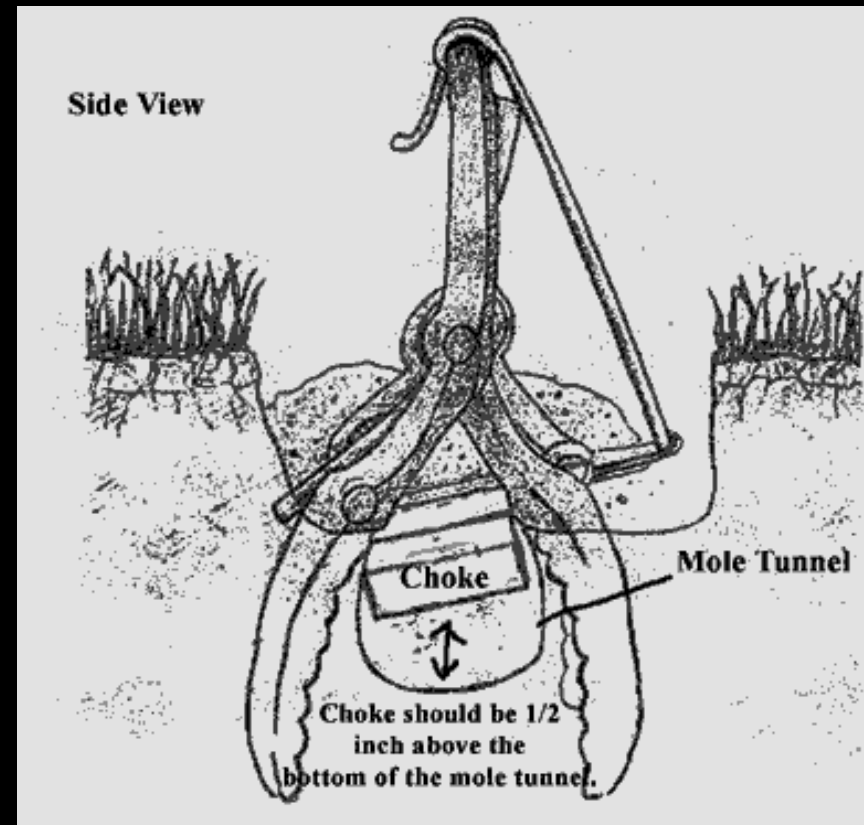
# Victor Out of Site



**"Speed Bump"**

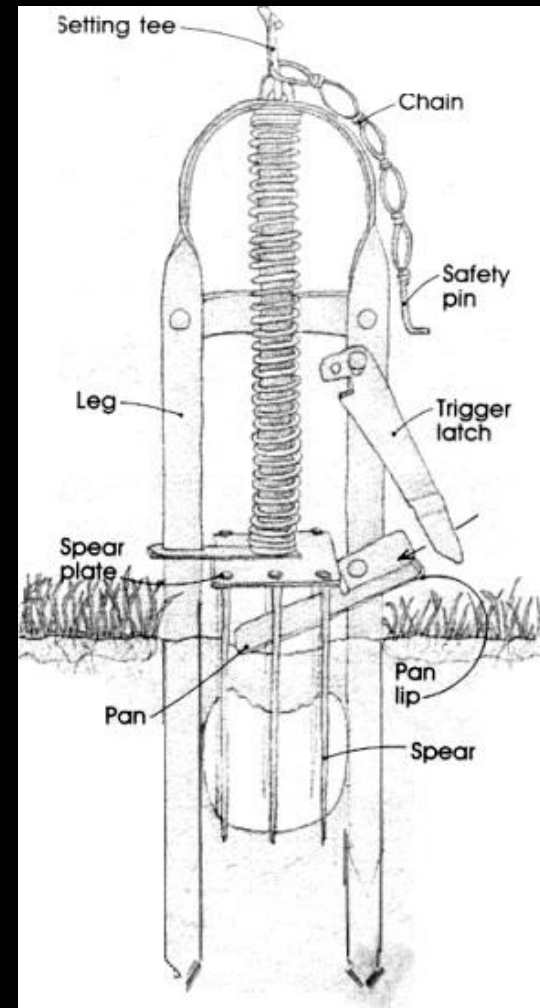
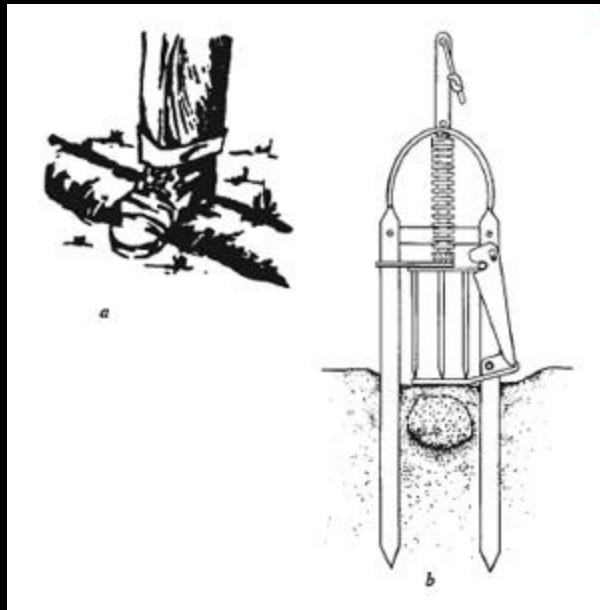
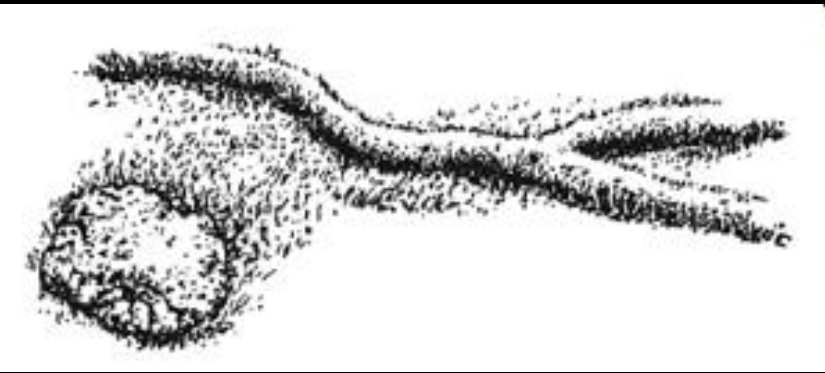
[WWW.GOPHERSLIMITED.COM](http://WWW.GOPHERSLIMITED.COM)

# Victor Out of Sight

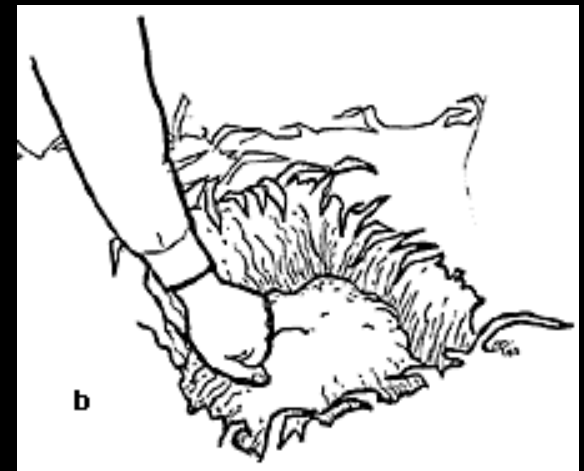
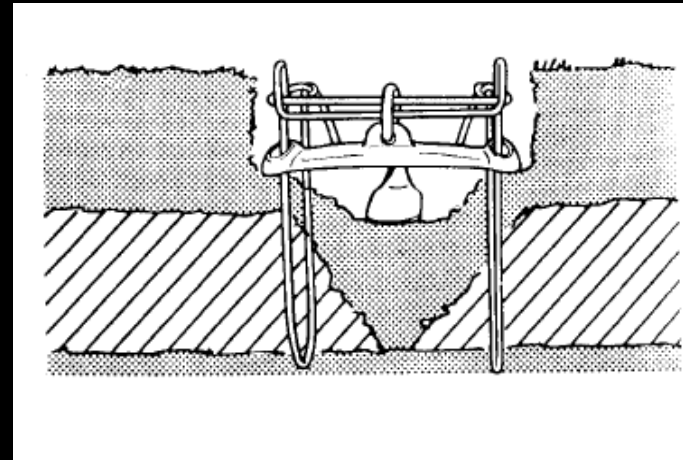




# Victor Harpoon Type Best For Surface Mounds

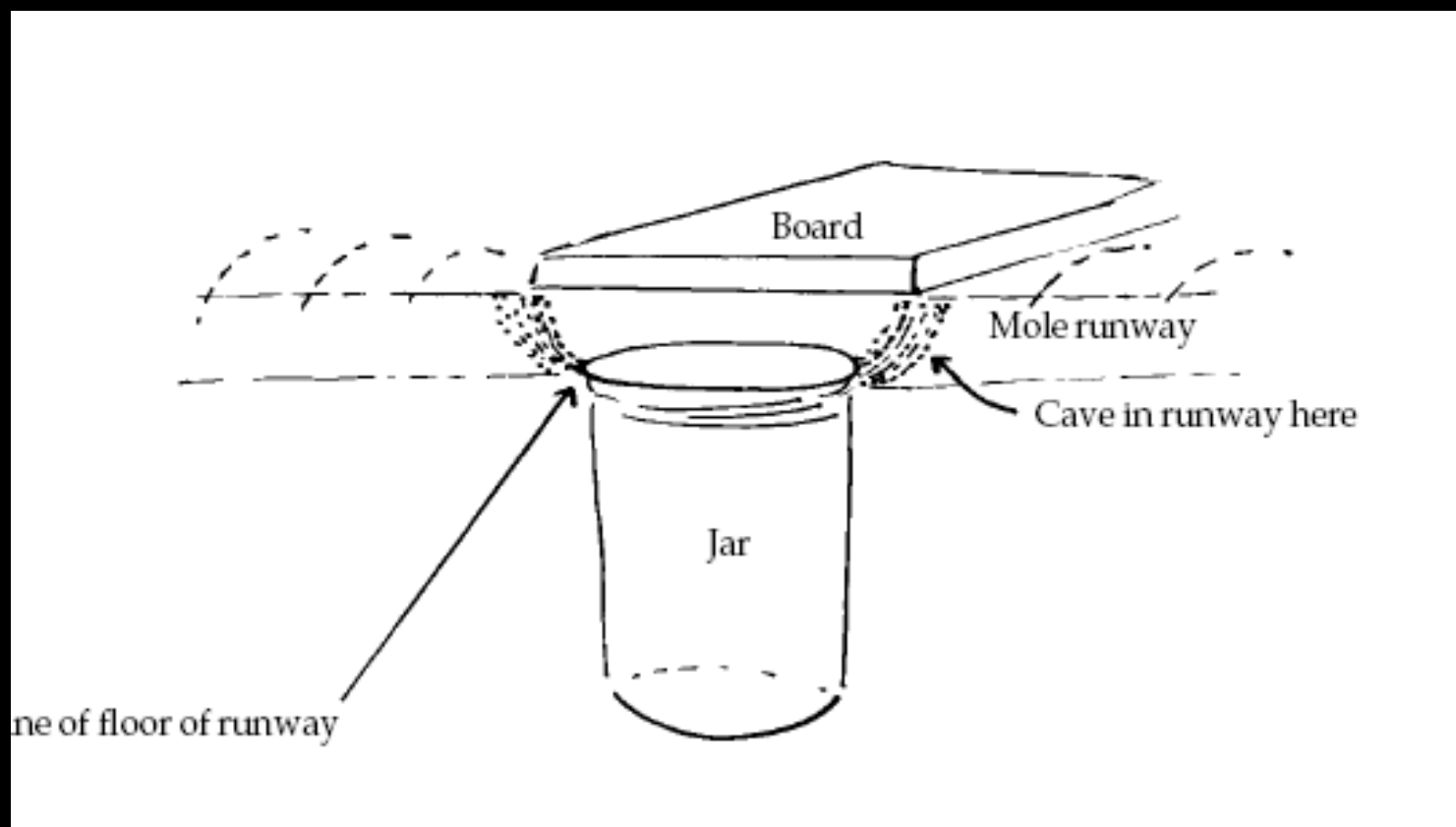


# Nash Choker Loop Mole Trap

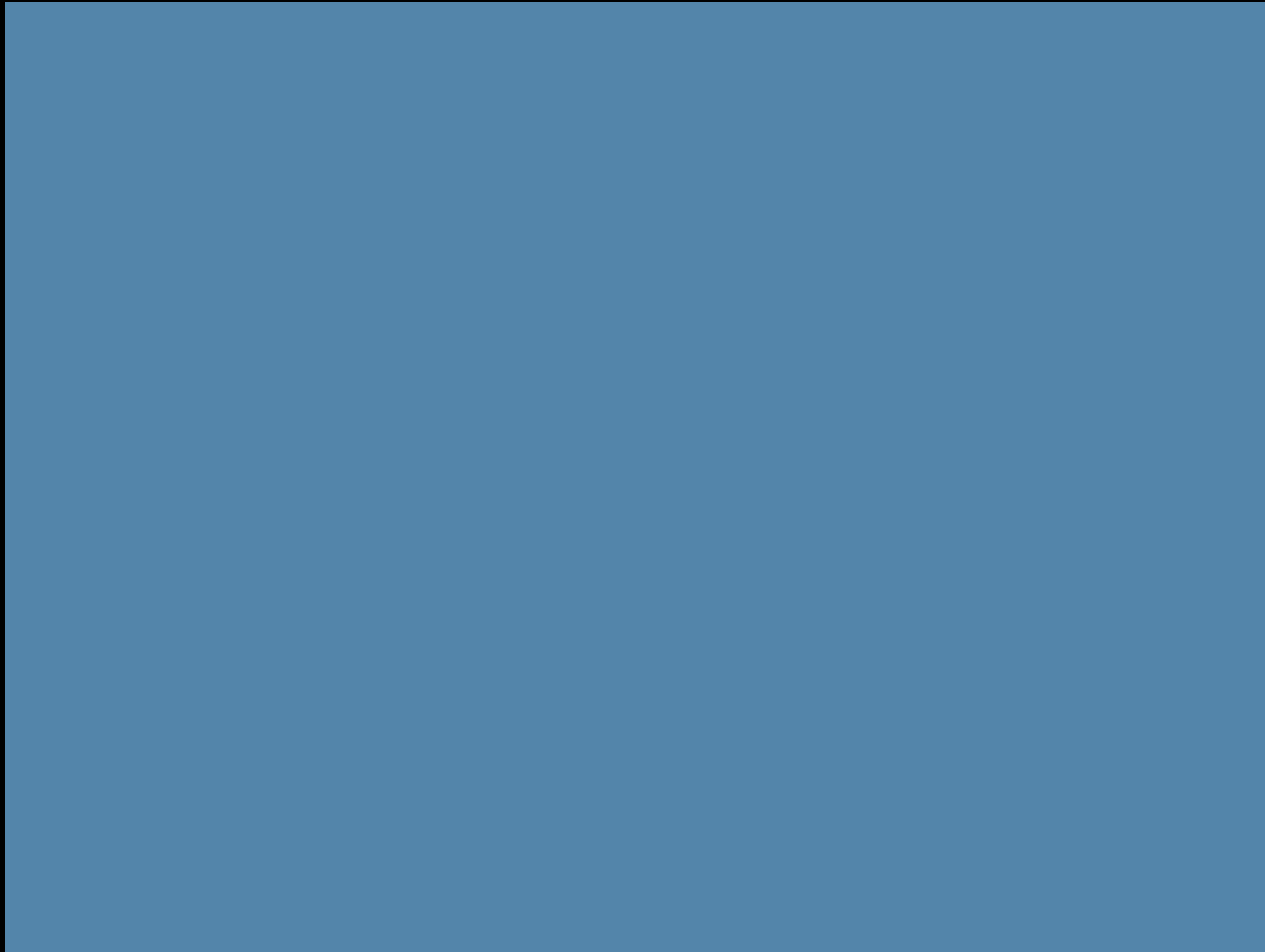




# Simple Mole Pit Trap



# Cinch Trapping Moles From Surface



To see this film online go to [www.youtube.com/gopherslimited](http://www.youtube.com/gopherslimited)



# Tree Squirrels

- \* Trim limbs and trees to 6 to 8 feet prevent squirrels from jumping onto roofs.
- \* Avoid attracting squirrels with bird feeders and other outside food
  - Block the “squirrel highway.” with sticky barriers
  - Remove or relocate problem squirrels

# Tree Squirrels







## Custom Mole Wacker



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# California Ground Squirrels



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# Basic California Ground Squirrel Biology

- Burrows are 4 inches in diameter, 5 to 30 or more feet in length and go to a depth of 2 to 4 feet.
- Breed once a year, 7-8 per litter from December to April
- Eat grasses and plants in Spring, seeds and nuts in fall





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UC Statewide IPM Project  
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# Ground Squirrel Control

- **Trapping with live and kill traps**
  - Conibear No. 110, box traps, Tomahawk, Black Fox or Havaheart
- **Fumigating with gas cartridges**
  - ☐ Purchase from Ag Commissioner or hardware store
  - ☐ Best done in winter or spring or after irrigation
- **Toxic Baits**
  - Rodetrol may work if bait stations are on paths and it is fall
- **Habit Modification**
  - Eliminate brush piles and debris
  - Destroy burrows constantly by disking or other means
- **Rodent Torch blasting**
- **Shooting**

# Black Fox Repeating Squirrel Trap



*13 Squirrels*

*8 Squirrels*



[www.thetrapmaker.com](http://www.thetrapmaker.com) \$45.00

WWW.GOPHERSLIMITED.COM



# Ground Squirrel Trapping Using a Repeating Trap

- Pre bait area near burrow but not at burrow entrance
- Bait with grains during dry times, fruits and nuts during wet times
- In some climates Ground Squirrels do not hibernate or aestivate
- Bait until squirrels are congregating at bait pile
- Bait every day at same time
- Leave trap next to bait so squirrels become used to it
- When feeding frenzy is steady, open cage outer doors to expose one way doors
- Empty trap early in the day and dispatch animals
- Do not leave trap open over night



# Euthanasia Box



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GROUND  
SQUIRREL

'08  REPEATED


## Ground Squirrel Containment Barriers

- Can discourage dispersal or invasion because:
- Ground squirrels are visually oriented animals that have a strong need to keep their burrow entrances in sight at all times.
- Vinyl barriers
  - Root Guard, lawn edging strips or any wide slippery material
- Wood slatted privacy fencing (at least 3' high) in conjunction with wire mesh and vinyl barriers
- Tall grasses used along with other barriers can lead to permanent solution
- Electric Fence set at 1 and three inches over plastic weed barrier

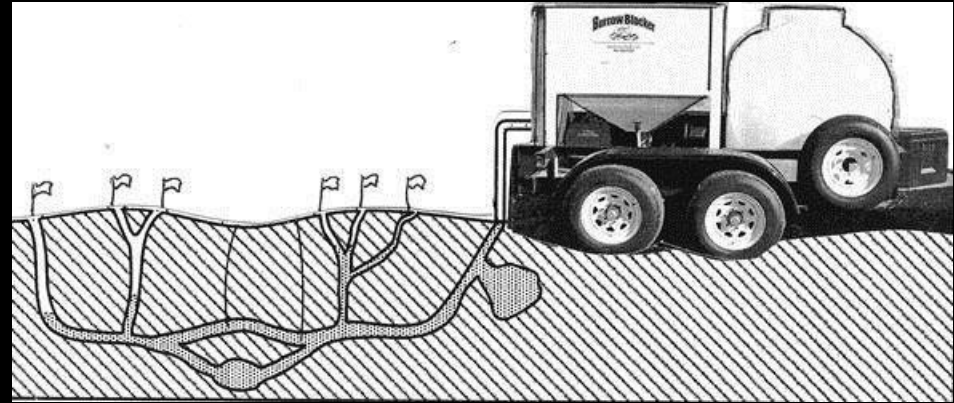


# Rodenator at Esalen





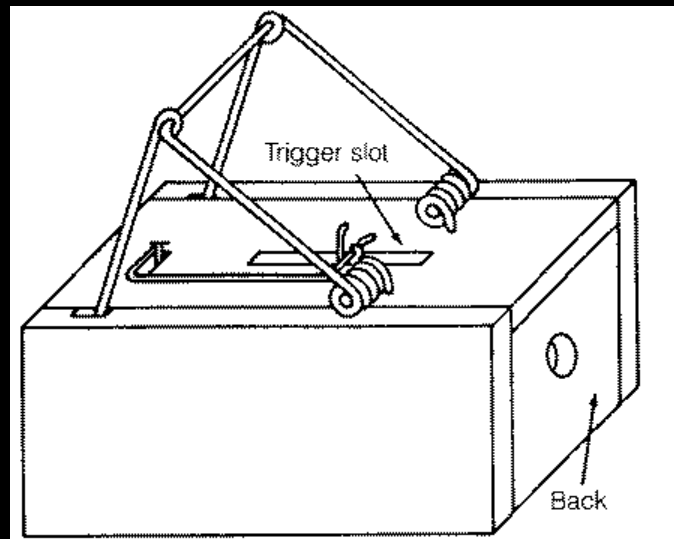
# Burrow Blocker



**Amerigreen Technology Inc.**  
**dba Burrow Blocker**  
P.O. Box 1540  
Byron, CA 94514  
**Phone:** (925) 634-9204  
**Fax:** (925) 634-9595  
[info@burrowblocker.com](mailto:info@burrowblocker.com)



# Common Ground Squirrel Traps



# Home Made Squirrel Trap





# Yellow Bellied Marmots



**Size:** 12"-24" long, weighing 6 ½ - 15 ½ lbs

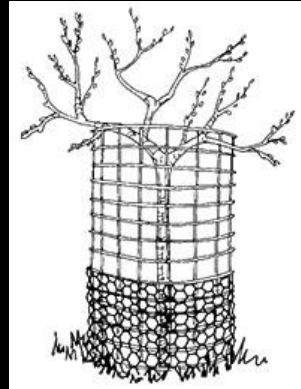
**Color:** Long thick fur that is yellowish brown, brown, reddish black, or a mixture of grey and white

also known as the "Whistle Pig" or the "Rock Chuck."

Very similar to Ground Squirrels and can be controlled in same way. As this animal is new to coastal California, be very aggressive about colony build up

Building a fence is also an option, but it must be high off the ground so the marmot can't climb it, and it must be deep enough so the marmot can dig under it.

# Rabbits





# Rats and Mice

- Wood Rats, Roof Rats, Norwegian Rats



# Ways to Deal with Rats and Mice

- Exclusion is best
  - Wire or cover openings
- Remove food source if possible
  - Bird and chicken feeders
  - Compost and vermicompost piles

Poisoning rats can lead to smells in walls

Rats destroy 20% of world's food supply every year



# Rat Trapping - Lethal



\*Also available in UV



# General Rat Trapping Rules

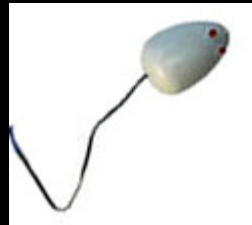
- Set traps in path of animal
- Leave traps unset for first couple of days
- If you use bait tie it to trap trigger
- Vary trapping methods
- Be careful not to trap non target animals



# Typical Rat Entrance Under Eaves



# Rat Trapping - Electronic





# Rat Zapper

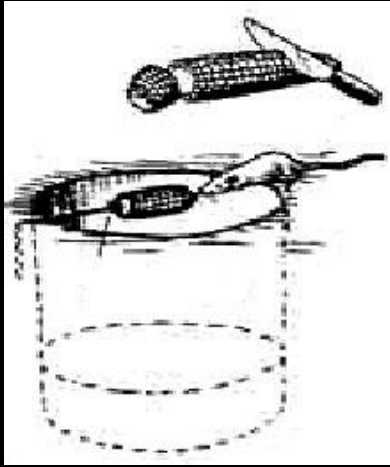


# Use Protective Trap Enclosures for Outdoors





# Rat and Mouse Bucket traps



Just Google rat bucket trap and search images for hundreds of variations

# Bucket Trap Roller





# New Zealand Repeating Rat Trap

[SHOP](#)[SUPPORT](#)[RATS & MICE](#)[DISTRIBUTORS](#)[ABOUT](#)[HOME](#) / [SHOP](#) / [A24 TRAPS](#) / A24 RAT AND MOUSE TRAP KIT WITH COUNTER

IN  
STOCK



## A24 Rat and Mouse Trap Kit with Counter

\$199.99 (Free Shipping)

The Goodnature A24 Automatic Rat and Mouse trap is a revolution in pest control!

It combines superb design engineering principles and behavioral science with the highest manufacturing standards to deliver a trap that lasts for years and kills 24 times per CO<sub>2</sub> canister.

[Click Here](#) for important delivery information.

1

Add to cart

SKU: A24CM-01 Category: [A24 Traps](#)

# Goodnature Trap

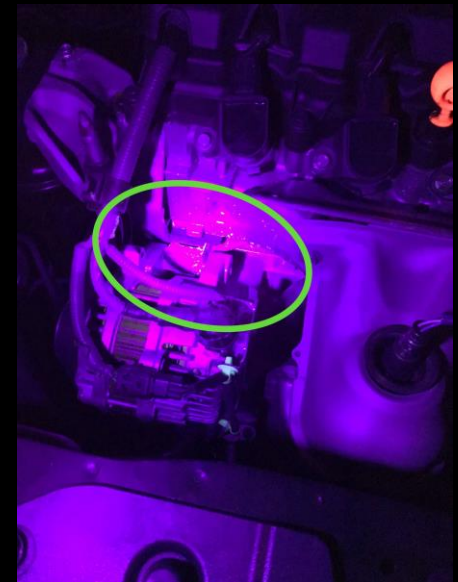




# Rats, Mice Eating Auto Wiring

- Leave the hood up. ...
- Hide your food, dog food, cat food, etc
- Remove or seal off rat hiding places
- Block holes to the engine compartment
- Use electronic deterrent devices
- Make your engine and its entrances smell bad, at least to rats. (Critter Ridder)

# Wiring protection





# Does Your Car have soy based wiring?

- Many 2012-2016 Toyota models
- Many 2012-2016 Hondas
- Many more mostly in those years



<https://www.howtopreventratsfromeatingcarwires.com/2017/02/10/does-your-car-have-soy-based-wiring/>

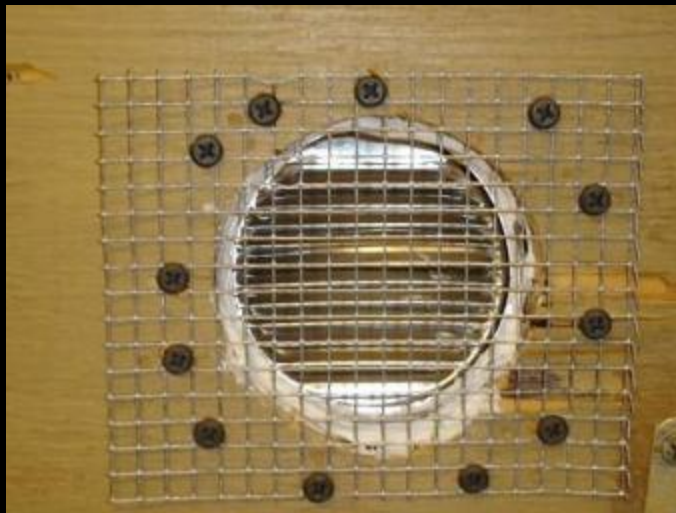
# Rat Trapping - Live



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# Exclusion



Hardware cloth and screws



Flashing with galvanized or aluminum flashing



Stuffing holes with copper mesh or coarse steel wool



# Working With Larger Animals

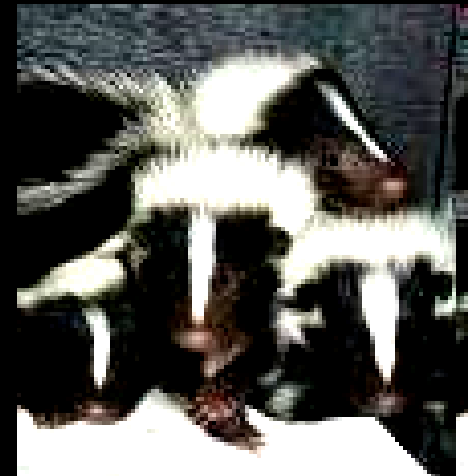
- Determine if there is a way to deter or exclude animal
- Discourage animal by adding odors
- Use one way doors
- Trapping is last resort
  - Use proper trap for target animal
  - Be aware of spring litters
  - Be sure to check local laws



# Larger Animal Problems



- Raccoons, Skunks and Opossums
  - May be deterred by sprays
  - Motion sensor sprinklers
  - Fencing







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# SCARECROW Sprinkler



Deer, Cats, Rabbits,  
Raccoon, Dogs, Squirrels,  
Skunks, Garden Pests,  
Rats/ Mice, Moles, Ground  
Hogs, Geese, Heron,  
Cranes, Raccoons,  
possum, cougar, bear

**\$50-80**

# Ultra sonic Repellers



**\$20-100**



**[WWW.GOPHERSLIMITED.COM](http://WWW.GOPHERSLIMITED.COM)**



# Deer Shield



\$250

Digital recordings of alarmed, aggressive, hostile and territorial deer



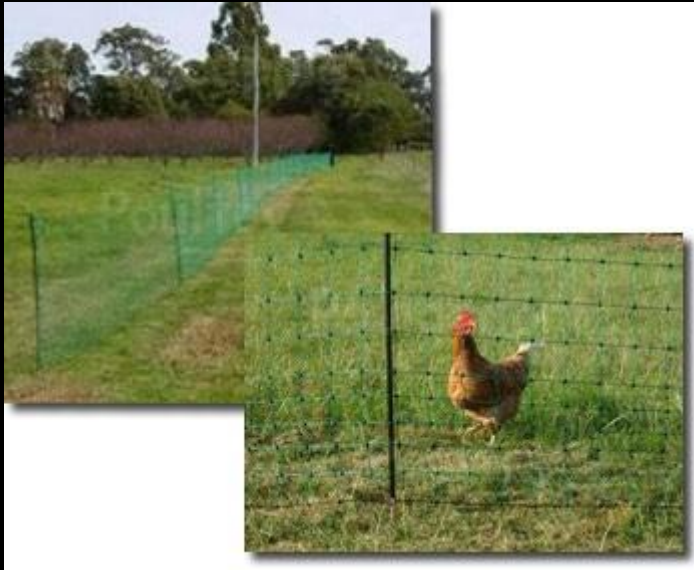
Motion activated or timer activated on smaller unit

Each speaker protects up to 1.5 acres

\$545 with 1 speaker  
\$85 per additional  
speaker

[WWW.deershield.com](http://WWW.deershield.com)

# Electric fence can keep animals in and out



PoultryNet™ 12/42/3 Kit - (42" x 164') \$169





# Hot Pepper Sprays

- **Hot Pepper Repellant Recipe**

- You need:

- 1. One chopped yellow onion
- 2. One chopped Jalapeno pepper
- 3. One tablespoon of Cayenne Pepper



Boil ingredients for 20 minutes in two quarts of water. Then let it cool and strain the mixture through cheesecloth. Lasts for three to five days.

# Pepper Sprays That Stick





# Smelly Formulas



Small Critter  
Powder  
(Fox Urine  
Powder)  
100% Natural  
\$15.95

putrescent egg



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# Havahart Critter Ridder



Oil of Black Pepper ..... 0.480%  
Piperine (From Oleoresin of Black Pepper)  
..... 0.185%  
Capsaicin and Related Capsaicinoids  
(From Oleoresin of Capsicum)

OMRI Listed Organic

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# Live Trapping Large Pest Animals

- Use Cage traps
- Take to Native Animal Rescue
- Be sure to get whole family
- Have a plan
- Remember that trapping is last resort

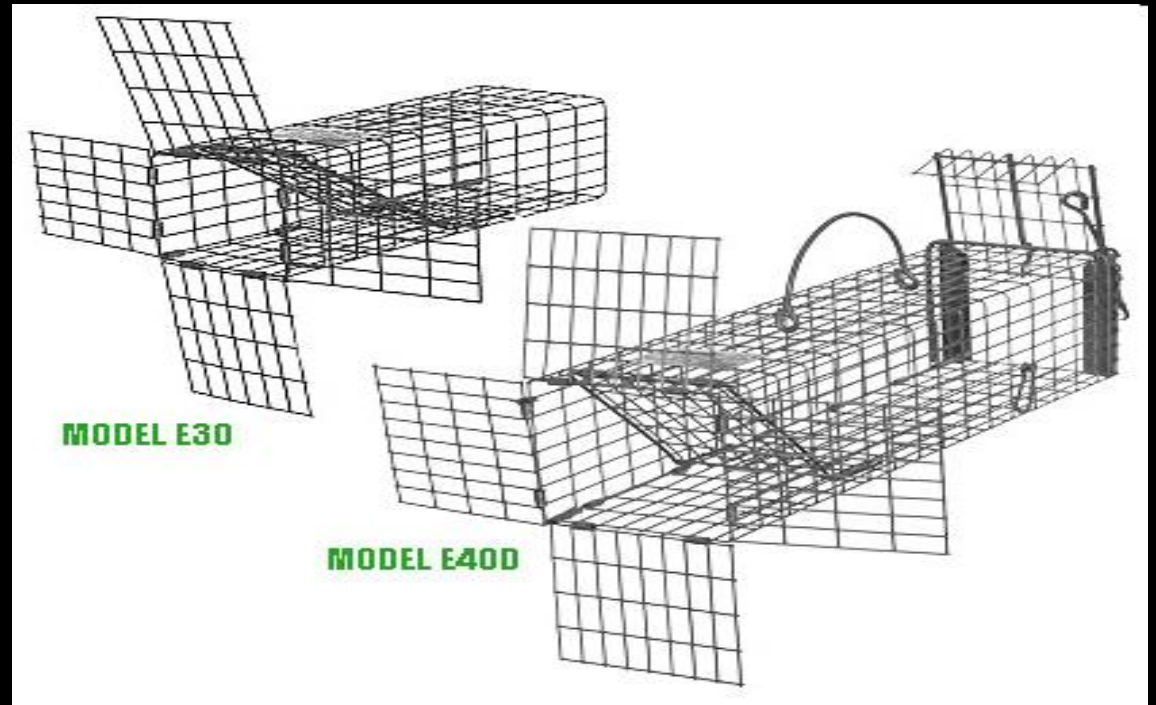
# Live Traps



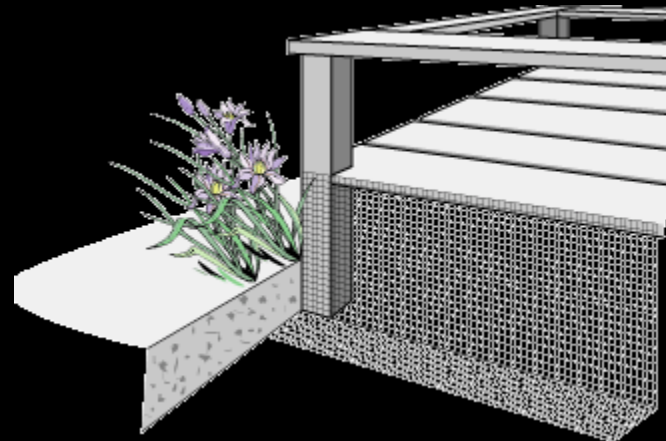
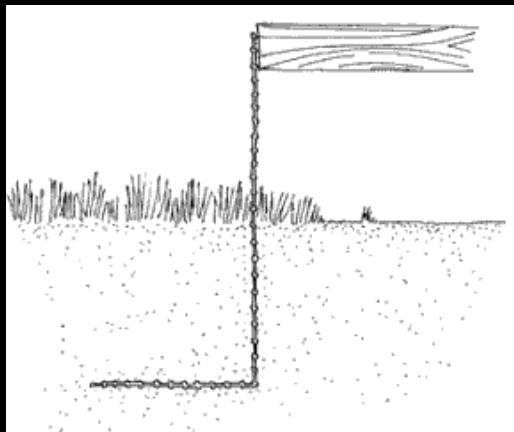
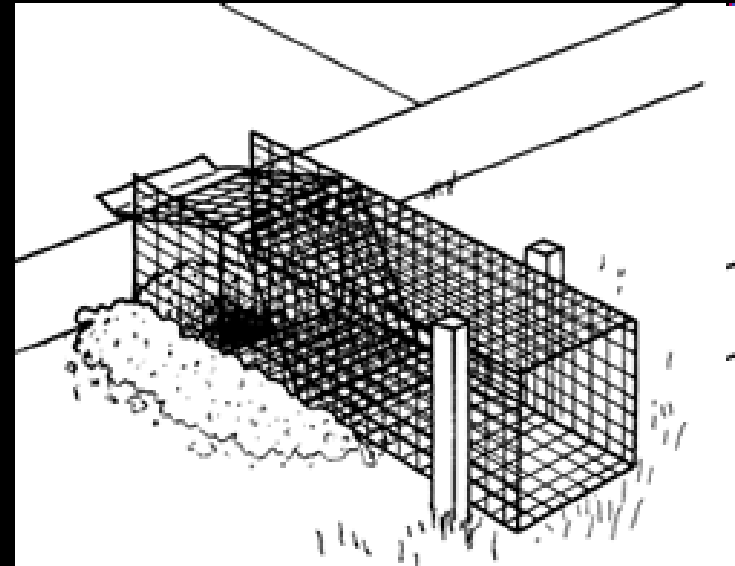
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# One Way Doors



# Exclude and use one way doors



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# Common Skunk Damage and Access









# Bucket Trap



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# Easy Release from Bucket Trap







# DuraPoly Live Trap

- Easy to use
- Animal feels safe and contained
- Protects trapper from bites diseases and sprays
- Can be used as a euthanization chamber





# Using Durapoly Traps



# Deer and Wild Pigs

- Wire Fence is best solution

- Inexpensive net fence
- Electric fence problems

Sprays and drenches are temporary and high maintenance solutions





# Wild Pigs Garden Barrier



Surround your garden with fine plastic mesh. Lay it low on the ground so that it is 2 to 4 inches above the soil. Plants will grow through the mesh, but it works as a barrier. Pigs will not traverse an area where their feet may become entangled.

# Electric Fence For Wild Pigs





# Who to Call if you have a wild pig

- Invite a licensed hunter(s) onto your property under DFG regulations to take the pig(s).
- Call Vector Control to come out and assess. If they trap an animal, they will dispose of it.
- Call your County Agricultural Commissioner
- Call the California Department of Fish and Game
- Call the local USDA Wildlife Services staff or County Trapper

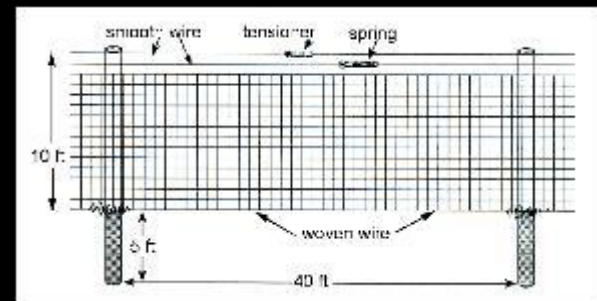
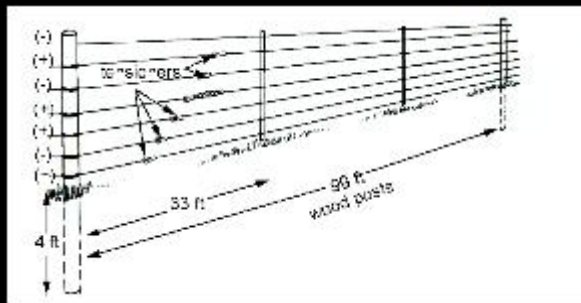


Standard 7'7" 328 ft \$330  
Heavy Duty 165' \$225  
UCSC Arboretum 4272998

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# High Tensile Wire Deer Fence



# Resources and Questions

- A lot of information is on the web. Use keywords like “gopher trapping”, “pocket gopher”, “gopher traps”
- Talk to neighbors about joining you in this mission
- Enlist the aid of trappers or professional landscapers



## **Web Resources for Gopher, Mole and Vole Control**

[www.bugspray.com](http://www.bugspray.com) A very complete online catalog and information site with an index of pest problems and a narrative solution portion linked to products

<http://www.nwtrappers.com/catalog/traps/gophermole.asp> Also known as Cumberland's Northwest Trappers Supply is probably the most complete trap supply house in the US. Cinch, No-mole, Macabee, drenches and many other products at reasonable prices.

[www.molepro.com](http://www.molepro.com) This site is mainly concerned with moles and is packed with useful information about myths and natural history of moles. There are many tips on keeping them away and on trapping

Common Sense Pest Control by Bill and Helga Olkowski and Shiela Daar This book is available from almost any book seller and is an encyclopedia of useful non toxic information about pest control and has a great section on gophers and other burrowing animal pests.

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→ contact me

→ See this lecture online

→ Links to more information

→ Purchase traps, gopher  
wire, tools and video



